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Vignaud

VIGNAUD PAMPHLETS

Crete

Boyd, Harriet A.
Excavations at Gournia, Crete.

Bunbury, E.H.
Crete.

Clermont-Ganneau.
Inscription Bilingue Minéo-Grécque, découverte a Délos.

Evans, Arthur J.
The Minoan and Mycenaean element in Hellenic life.
New archeological lights on the origins of civilization in Europe.
Palace of Minos.

Hall, Edith H.
The decorative art of Crete in the bronze age.

Reinach, Adolph J.
A propos des empreintes murales de Knossos.

Ridgeway, William.
Minos the destroyer rather than the creator of the so-called "Minoan" culture of Cnossus.

EXCAVATIONS AT GOURNIA, CRETE.

BY

HARRIET A. BOYD.

FROM THE SMITHSONIAN REPORT FOR 1904, PAGES 559-571
(WITH PLATES I-III).

(No. 1633.)

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
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EXCAVATIONS AT GOURNIA, CRETE.[a]

By Harriet A. Boyd.[b]

INTRODUCTION.

> There is a land called Crete in the midst of the wine-dark sea, a fair land and a rich, begirt with water, and therein are many men innumerable, and ninety cities.—Odyssey, xix, 172, Butcher and Lang's Translation.

The high expectations which scholars held of the good that would come to archeology through systematic excavations in Crete have not been disappointed. It is still too early to estimate the full value of the excavations which have been made by the British at Knossos,[c] Psychro,[d] Praesos,[e] Zakro,[f] and Palaiokastro,[g] by the Italians at Phaestos[h] and Aghia Triadha,[h] and by the American Exploration Society at Gournia. Enough has been unearthed, however, in the last four years to revolutionize our ideas of the state of culture attained by the Cretans of the "golden age" during the third and second millenniums B. C., and to lay surer foundations for the study of European civilization than ever before existed. Further work will no doubt bring many fresh surprises and will throw new light on the origins of Mediterranean culture.

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[a] Report of the American Exploration Society's Excavations at Gournia, Crete, 1901–1903.

[b] An abstract from transactions of the department of archeology, University of Pennsylvania, Vol. I, pts. 1 and 2, 1904, printed by permission of the American Exploration Society.

[c] See articles by Mr. Evans on the Palace Site in British School Annual, 1899–1900, 1900–1901, 1901–2, 1902–3, and an article by Mr. Duncan Mackenzie on the Pottery of Knossos in Journal of Hellenic Studies, 1903.

[d] See article by Mr. Hogarth in British School Annual, 1899–1900.

[e] See article by Mr. Bosanquet in British School Annual, 1901–2.

[f] See article by Mr. Hogarth on Excavations in British School Annual, 1900–1901, and article by Mr. Hogarth on Zakro Vases in Journal of Hellenic Studies, 1902.

[g] See article by Mr. Bosanquet in British School Annual, 1901–2.

[h] See article by Mr. Halbherr and Mr. Pernier in Monumenti Antichi della Reale Accademia dei Lincei, Vols. XII, XIII, and XIV.

The great palaces at Knossos and Phaestos complete each other architecturally, the former giving an elevation of three or even four stories, the latter furnishing a ground plan "simple and grandiose," as it has been called by Mr. Evans. In both we see the houses of rich princes who loved luxury, who patronized the arts of builder, sculptor, and painter, and used the talents of the scribe as well. The smaller finds at Knossos and Aghia Triadha by their variety and number give us a fuller knowledge of this prehistoric civilization than we have of many a later stage of culture, but of this, as of most subjects which deserve any investigation, the more we know the more we want to know. Palaces and tombs are not sufficient; we want also the homes of the people, for without an insight into the life of "the many" we can not rightly judge the civilization of any period. By a singular chance a well-preserved town, dating from the earlier period of the Great Palace at Knossos (about 1800–1500 B. C.) and containing a large quantity of tools, pottery, and other articles of daily use, has been brought to light by the excavations of Americans ("people of the great democracy," as Cretans call us) at Gournia, on the north shore of the isthmus that connects the east end of the island with the rest of Crete. It is not rash to suppose that this is one of the ninety cities mentioned by Homer in the famous passage of the Odyssey quoted above.

THE ISTHMUS.

Strabo, in Book X, Ch. IV, 3, of his Geography, describes the long, narrow island of Crete, with its northern coast line indented by deep gulfs, which at two points reduce the island to less than half its average width. At the Isthmus of Hierapetra, which is the eastern of these two points and the narrowest portion of the island, the northern and southern shores lie but 60 stadia (12 kilometers, about 8 miles) apart. Here nature has made the communication between sea and sea not only short, but easy, by leaving a narrow strip of lowland between the mountain ranges of Dikte in Sitia and Dikte in Lasithi (the legendary cradle of Zeus), a break in the long chain that forms the backbone of Crete. East of the isthmus an almost vertical rock wall of mountains hides from view the summit of Aphendi Kavousi, which dominates Sitia (1,472 meters, or about 4,829 feet), while across the valley to the west the land rises in more gradual ascent to mountain level, and from many foothills Aphendi Khristos[a] (2,155 meters, or about 7,070 feet), the loftiest peak of Lasithi, can be seen.

At the northeast corner of the isthmus, shut in by mountains on the east and coast hills on the west, lies the plain of Kavousi. In

[a] Aphendi Khristos is sometimes written Effendi Christos.

seasons of abundant rain like 1903 it gives good yields of olives, carobs, grapes, and grain; but in dry years like 1901 it is parched and fruitless. More fertile, because better watered, is the lovely valley of Kalo Khorio, which occupies the northwest corner of the isthmus, descending to the Gulf of Mirabello. Between Kavousi and Kalo Khorio[a] the coast, though utterly barren, is wonderfully beautiful. At Pachyammos there is a good beach; elsewhere steep cliffs, alternating with coves, form a coast line as picturesque as any in southern Europe, and within these coves rest waters as clear and rich in color as those of Capri. The main highway of Crete, connecting Sitia, Herakleion (Candia), Rethymo, and Canea, follows this coast and near Pachyammos meets the road that crosses the isthmus from Hierapetra. Since the earliest times this isthmus road must have been in constant use, for no other route across the island is so short, so level, so direct. Halfway between the two seas stands Episkopi, and side roads lead east to Monasteraki, Kato Khorio, and Apano Khorio, at the foot of the Thriphte Range, and west to Vasiliki and Kentri, situated on low hills. From Episkopi south the lowland widens, and, being watered by mountain streams, is richly productive of lemons, oranges, figs, and mulberries, as well as of the commoner fruits and grains. This cheerful fertility continues until the neighborhood of Hierapetra is reached, a region as barren as the northern shore and far less interesting.

From time immemorial the isthmus has been inhabited, and yet it is an interesting fact that with the exception of Hierapetra, where the modern city is built above ruins of Hellenic and Roman cities of the same name, the sites occupied at different periods are distinct[b] one from another. Men of the bronze age chose low hills not far from the sea; their successors, a ruder people of the iron age, had strongholds on almost inaccessible mountain heights; Greeks and Romans established trading stations on the shore; Venetians and Turks built watch towers and block houses at commanding points for the purpose of holding the unfortunate Cretans in subjection; modern Cretans still prefer the security of the hills, but a seaward movement has already begun as a result of the peace and order that since the liberation of Crete in 1898 have prevailed throughout the island. * * *

My first year's work on the isthmus of Hierapetra as Fellow of the American School of Classical Studies at Athens has been described in an article entitled "Excavations at Kavousi, Crete, 1900," published in the American Journal of Archeology, second series, Volume V, 1901, pages 125–157. Opportunity for a second campaign was given

[a] *Καλὸ(ν) Χωρίο(ν)*, beautiful village, is aptly named.

[b] Azoria Hill may be an unimportant exception to this rule.

me in 1901, when the American Exploration Society, of Philadelphia, offered to support further researches in Crete. Mrs. Cornelius Stevenson, secretary of the society, actively forwarded the enterprise, and Mr. Calvin Wells, of Pittsburg, and Mr. Charles H. Cramp, of Philadelphia, generously contributed the necessary funds. My colleague in 1901 was Miss B. E. Wheeler, of Concord and Providence, one of my classmates at Smith College. Miss Wheeler and I landed in Crete April 7. Much progress had been made at Knossos and Phaestos, and such success in the Mycenæan and pre-Mycenæan field, or, to use more up-to-date nomenclature, the "Minoan" field, increased our longing to find something belonging to this golden age of Cretan history.

We made a round trip through Chersonnesos (a Greco-Roman city), Neapolis (the town from which one visits a difficult iron-age site at Anarlachos and the Hellenic Deyros), Olunta (ancient city Olus, near which lie remains probably prehistoric), Gonlos (site of the ancient city Lato and of an important prehistoric settlement), Kavousi, Episkopi, Mesoleri (ancient Oleros), Kalamavka (reserved by British as a prehistoric site), Mallais (Homeric Malla), Psychro, and back to Herakleion. On this trip we saw nothing more promising than our clue at St. Anthony's and the Cyclopean wall at Avgo, and as Miss Wheeler was willing to try a second year's luck on the isthmus of Hierapetra, we informed the Government of our wish to renew work in that region. The St. Anthony clue was too slight to be mentioned save between ourselves, and when we returned to Kavousi presumably to find geometric or at best sub-Mycenæan things, our quest excited pity rather than envy among the archeologists at Herakleion.

We went directly to Avgo to learn the nature of the megalithic structure near the Chapel of the Virgin. Avgo Valley is so overshadowed by the surrounding mountains that the sun does not reach it until late, and the mornings and evenings are very cool. Consequently the peasants live here only in summer and content themselves with one-room stone huts without windows.

For two weeks our party living in these huts suffered some hardships, especially during thirty-six hours of incessant rain that caused serious floods in eastern Crete, wrecked a hut near us, loosened our own walls, and poured into the hut we used for a kitchen. The results of our excavations at Avgo were meager.[a] On holidays and on days when the ground was too wet for digging we rode up and down Kavousi plain and the neighboring coast hill seeking for the bronze-age settlement, which I was convinced lay in

[a] See Transactions Department of Archeology, University of Pensylvania, 1904, pp. 18–20.

these lowlands somewhere near the sea. It was discouraging work, for my eyes soon came to see walls and the tops of beehive tombs in every chance grouping of stones, and we went to many a "rise of ground which at a distance looked a perfect Mycenean hill, but proved to be all rock. From an archaeological, as well as an agricultural, point of view the curse of the Kavousi region is the shallowness of soil; even at Gournia we often have occasion to bemoan it. At last the rumor of our search reached the ear of George Perakis, peasant antiquarian of Vasiliki, a village 3 miles west of Kavousi, and he sent word by the schoolmaster that he could guide us to a hill three-quarters of a mile west of Pachyammos, close to the sea, where there were broken bits of pottery and old walls. Moreover, he sent an excellent seal stone picked up near the hill, and although seal stones are not good evidence, being easily carried from place to place, his story was too interesting to pass unheeded. Accordingly, on May 19, Miss Wheeler and I rode to the spot, found one or two sherds with curvilinear patterns, like those from St. Antonys; saw stone in lines, which might prove to be parts of walls (never more than one course visible), and determined to put our force of 30 men at work there the following day. Three days later we had dug 19 trial pits and had opened houses, were following paved roads, and were in possession of enough vases and sherds, with cuttlefish, plant, and spiral designs, as well as bronze tools, seal impressions, stone vases, etc., to make it certain that we had a bronze-age settlement of some importance. Accordingly, I sent the following cablegram to the American Exploration Society, which was received in Philadelphia four days after the first visit paid by me, or, as far as I can learn, by any archeologist to the site of Gournia: "Discovered Gournia—Mycenean site, street, houses, pottery, bronzes, stone jars." We immediately petitioned the Cretan Government for special permission to excavate this new site for the American Exploration Society of Philadelphia, and our request was promptly granted.

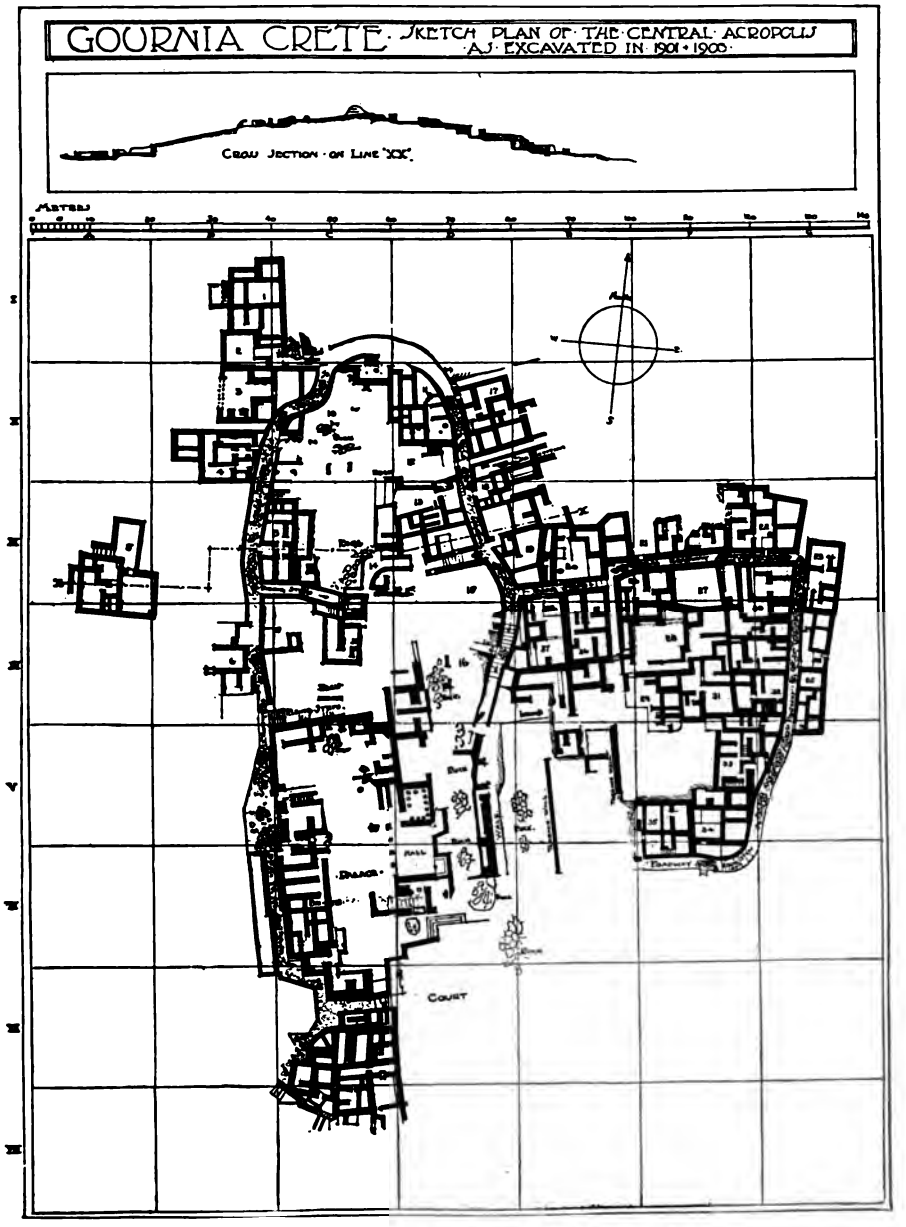
FIG. 1.—Bronze spear head. First "find" at Gournia, May 20, 1901.

Gournia is a name given by the peasants of the district to a basin opening north on the Gulf of Mirabello and inclosed on the other three sides by foothills which rise west of the narrow strip of isthmus. For one-half its length from south to north this basin is divided into two narrow valleys, of which the western forms a broad torrent bed,

dry in summer. The southern end of the ridge was used in Greco-Roman times, for here in the chapel of Aghia Pelaghia is a stone bearing the inscription "Klythos made (it)," and close at hand graves have been discovered containing Roman vases. This end of the ridge being for the most part an irregular mass of limestone, is suitable, perhaps, for burial, but not for habitation. Farther north the ridge becomes less rugged; platforms of earth are upheld by rock ledges; there is a slight dip, and we stand on the acropolis of the ancient city, every foot of its summit and slopes covered with roads and dwellings. But the rock reappears at the northern point of the ridge, beyond which the valleys meet and extend in one plain to the sea. The eastern valley and a small part of the plain can be cultivated, but hills and shore bear no crops except stones and low carob trees. The rugged character of the ridge and the dense growth of carobs which covered it made it possible for the acropolis to escape the notice of passing archeologists, although many had traveled along the important highway from Herakleion to Sitia, which actually crosses the lower part of our site and lies within one-eighth of a mile of the acropolis itself. The higher hills south and southwest of Gournia are composed of pudding stone, which easily breaks off in shallow caves, while the lower hills are of limestone, like the ridge.

Our town, which until we know its ancient name must be called by the modern designation Gournia, covered not only the middle of the ridge, where it rises 200 feet above sea level, one-quarter of a mile back from the gulf, but extended across the eastern valley up the hills to the east and northeast, so that the acropolis was the center of a settlement of considerable size. To-day the nearest harbor is at Pachyammos, a small coast-guard station three-quarters of a mile east of Gournia. This place seems destined to grow to an important port. An excellent road, built by French soldiers during the recent international occupation of Crete, connects it with Hierapetra, on the south coast, only 8 miles distant, and this land connection between the two seas across the narrowest portion of the island is preferred to rounding Sitia, where storms are frequent and severe. The line of the north shore has changed, and it may be that in early times the harbor lay in an arm of the sea directly north of Gournia. At all events, the sea has here encroached on buildings which are proved by construction and by contents to be of the same period as those on the ridge. From this group of buildings a road probably led up to the low acropolis, and on reaching the middle eminence must have met a road which we have found continues on both the east and west sides of the hill, rising by steps where the slope is steep, and conducting the traveler at length to the small palace of the local governor.

At the beginning of excavations only a few stones showed above the surface and many houses were entirely hidden, being discovered in



SKETCH PLAN OF THE CENTRAL ACROPOLIS, GOURNIA, CRETE.

FIG. 1.—OBJECTS DISCOVERED IN MYCENÆAN SHRINE.

FIG. 2.—OCTOPUS VASE.

OBJECTS EXCAVATED AT GOURNIA.

the course of digging by workmen who, following the roads, came upon their thresholds. The upper parts of the houses had fallen long ago, covering the hill with their ruins. On the top of the hill, where denudation is constant, there was but a scant covering of earth over the native rock; here some of the best objects of bronze and terra cotta were found within 50 centimeters of the surface, and, indeed, at certain spots, which we now know to have been within dwellings, the native rock lay bare. On the sides of the hill where earth accumulates we were often obliged to dig 4 or 5 meters before reaching virgin soil, live rock, beaten floor, or stone paving, as the case might be.

Excavations have been carried on at Gournia through two campaigns, May 20 to July 2, 1901, and March 30 to June 6, 1903, with a force of 100 to 110 workmen and about a dozen girls who wash potsherds. Unfortunately, Miss Wheeler could not leave America in 1903 to give her efficient aid toward the accomplishment of the work which we had started and planned together; but I was ably assisted in the second season by Mr. Richard B. Seager, who took special charge of the pottery as well as helping in the field. Miss Moffat, of Northampton, Mass., left a Paris studio to accompany the second year's expedition, and has made for the American Exploration Society a series of excellent colored drawings of some of the better vases and scores of drawings to scale of the commoner pottery, saving thereby many shapes which, through the inferiority of the common clay, would have been lost. I consider these drawings and others executed for us by the Danish artist, M. Bagge, among the most important contributions which have been made to archeology by our expedition.

The brief survey of results to be given here is strictly provisional, and will, I hope, be superseded by a more careful study of the work when the excavations at Gournia shall have been completed.

THE TOWN AND ITS BUILDINGS.

The sketch plan reproduced in the accompanying illustration, begun in 1901 by Mr. Fyfe, of Glasgow, architect for Mr. Evans at Knossos, and finished by me in 1903, with the help of Mr. Harold Hastings, gives a better idea of the town than words can. As the squares measure 20 meters on a side, the entire area cleared may be roughly computed as 2 acres, the top of the acropolis as about 1 acre, and the palace as one-third of an acre. Thirty-six houses and parts of several others are uncovered.

The roads of Gournia have an average width of about 1.60 meters and are paved with stones which seem to have been chosen from near the sea, and which, worn first by the sea and then by the passing of many feet, present a fairly smooth surface. They are laid with care, not actually fitting, but leaving no such ruts and holes as are

seen in Cretan roads to-day. Where the roads ascend we find flights of steps as in modern Naples; the longest flight is in the road that climbs the east slope.

Gournia houses are superior to any homes of bronze age people found on the Greek mainland. Their lower courses are of rubble, but often considerable care is taken in the choice of stones, and they are roughly aligned. The size of stones varies greatly—certain walls on the east slope of the hills being sufficiently massive to have suggested on first discovery fortification walls, but as further digging disclosed massive and weak walls side by side, we came to the conclusion, in which all who have visited the site agree, that the heavier construction belongs simply to the better-built houses and that the place is unfortified. The width of the house walls varies from 50 to 90 centimeters, 60 centimeters being the average. That the upper walls of many of the houses are of brick is abundantly proved. These bricks average 40 by 30 by 10 centimeters, and seem to be fire baked. Before May, 1901, only sun-baked bricks, or those accidentally burned by conflagration had been found in bronze age settlements in the Ægean; but almost simultaneously at Zakro at the extreme east end of the island, where Mr. Hogarth was conducting successful excavations, at Avgo, and at Gournia fire-baked bricks came to light in May, 1901, and they have since been found at Palaiokastro. The clay is coarse and unevenly baked, but the bricks retain their shape well. Bricks were used not only in upper walls, but also in partitions—always on a stone base. In a house on the east slope we found partition walls made of mud, which, after drying in the sun, was overlaid with plaster, a careless construction not uncommon in modern Greek villages. The marvel is that such flimsy work should have remained sufficiently intact for thirty-five hundred years to be immediately recognized and preserved by the workmen who dug it out.

Plaster is employed extensively on the door jambs and on the walls, both outer and inner, overlaying stone and brick. It is of several varieties, a coarse white kind and a gray pebbly sort being commonest. In some instances a coarse plaster covers the wall and a second finer layer covers this, the color of the finer layer being usually a very light bluish gray, although we have a few precious bits of brighter stucco of a shade somewhat deeper than the Pompeian red. In one of the western storerooms of the palace we found two small curiously molded pieces of stucco, one shaped as a thunderbolt and the other as a swallow; these have one flat surface, as if they might have formed ornaments in relief on the wall.

Doorways are carefully made with stone sills and bases for the jambs, which were in rare instances of stone covered with plaster, sometimes of wood, often of brick clay plastered over. A shapeless

mass of bronze, evidently reduced by heat, lay in a doorway of the palace, and may have formed a part of the trimmings of the door. As a rule the house walls are not sufficiently high for windows to have been preserved, but three openings in walls on the east slope were certainly intended to admit light and air. Floors were made of beaten earth, "terrazza" (a cement of pebbles covered with a layer of plaster), stone slabs, or paving stones like those in the roads. As for roofs, the evidence seems all in favor of the flat terrace forms common to-day in the East. Pieces of plaster still bearing impressions of reeds show what the ceiling must have been. In a ground-floor room of the palace a large tree trunk was found fallen and burned, completely charred through, but retaining its original shape; this supported either the flooring of the upper story or the roof. The central hall of the palace was choked with such timbers.

In plan the houses are simple, conforming to the lay of the land rather than to a fixed form. When similarity of plan can be detected, as in certain houses on the east slope, the arrangement is modern rather than classical and is in agreement with the mosaic pictures of Minoan houses found in the palace of Knossos in 1902. As in the mosaic, so at Gournia we see the houses built flush with the streets and usually provided with a good stone threshold; crossing this we enter a paved antechamber with doors leading to the ground-floor rooms and steps mounting to the second story; cellar steps may descend directly from the antechamber or from an inner room. Certain cellar rooms are finished in plaster and provided with doors; others were entered, if at all, by ladders from above and can have served only for storerooms; still others were mere substructures. Several houses on the east slope have open courts which seem to have been generally omitted in the private dwellings on the top of the hill for lack of space. We know that there were second stories, because five stone staircases are well preserved and the former existence of wooden steps at many other points is clearly indicated. Moreover, many objects, and these usually the best, were found in the earth at varying heights above the floor level, and except where there was proof that these had stood on a wooden shelf, since rotted away or burned, they must have fallen from an upper story.

No satisfactory explanation has yet been given for a stone object which is very often found just within the street door. It looks like a large mortar, and either stands upon the paved floor or is sunk beneath it to the rim. It would make an awkward basin, for there is no way of removing water except by dipping; on the other hand, its position, invariably close to the outer door, makes us think that it must have served some other purpose than the one of pounding and grinding which its form suggests, or at least that some special significance was attached to its use. No pestle has yet been found with

it, although smaller pestles and mortars are among our commonest finds.

Special mention should be made of the palace. On the west side are four storerooms communicating with a flight of steps, and three long, narrow magazines opening on a common corridor that correspond, though on a much smaller scale, to those at Knossos and Phaestos. The rooms south of these magazines were reached by a staircase, of which the steps are destroyed, but a transverse supporting wall still remains. West of the storerooms the road widens into a small plateia, of which we have not yet determined the western boundary. South of this is a space, having a cement pavement, which seems to be part of the palace, possibly a loggia, in which case the west road continuing south must have formed a covered way within the palace. From the southern end of this covered way a paved passage leads east, while the road continues southwest. The eastern passage ends in three steps ascending east and a return series of two steps which communicated with the building south of the passageway. Beyond the three steps is a large open court, which seems to answer to the west court of Knossos, and may have served as a market place for the town. This court was paved with cement; its eastern and southern limits are not yet reached. As we turn north from the steps we see on the left running north for a distance of 5.60 meters a stylobate, on which stood two square pillars, measuring 85 centimeters on a side at the base, with shafts about 20 centimeters less in dimensions. Of the southern pillar nothing remains, but its position can be distinctly traced on the stylobate; of the northern pillar we still have the base and lower part of the shaft. The profile of the base is carefully cut.

FIG. 2.—Sacred horns (coarse terra cotta).

Beginning March 30, 1903, at this portico, from which we had removed our last loads of earth in 1901, we dug northward into the center and, as it proved, the most interesting part of the palace. In the northwest corner of the court we came upon two low flights of steps at right angles to each other, which reproduce the arrangement at Knossos and Phaestos. Within their angle a pair of sacred horns, fashioned in coarse terra cotta, measuring 0.38 centimeter across and 0.38 centimeter in height, lay as if fallen from above. The flight of

steps leading west gives access to the interior of the palace. Without trying for the present to explain a huge single block of stone near the top of the steps that may have been the floor of a bath, we may turn northward, cross a threshold 1 meter wide and 2 meters long, and following a corridor that runs first west and then north, enter an inner court paved with cement ("terrazza") and open to the sky. The west side of this inner court was formed by a line of storerooms mentioned above, which lie on a somewhat lower level; north of the court are more storerooms, a corridor leading to the west entrance of the palace, a well-preserved bath, and a small staircase to the second story. On a step of this staircase stood a three-legged stone basin, too heavy to be saved by the owners or easily looted by an enemy.

The east side of the inner court opens through a portico composed of two square pillars alternating with two round on a square hall, which was certainly covered, as it was choked with fallen timbers, masses of plaster, and stone slabs that in Minoan houses, as in many Italian houses to-day, made the flooring of the second story. In the southeast corner of the hall is a rectangular recess with a stone bench around three sides and a round base for a column that must have supported an architrave across the open side. Here we may suppose the prince sat to receive his friends and to dispense justice. It is a semipublic part of the palace, corresponding to the throne room at Knossos. No doubt the private rooms were on the second story. To them a narrow flight of stairs led from the northeast corner of the hall. The walls of this hall are carefully built of well-squared blocks of soft limestone, like those used in the more important parts of the outer walls of the building. At first we were astonished to find immediately adjoining this important hall on the north one square and two oblong storerooms, the square room containing 12 huge pithoi, one of which is still perfect; but reflection shows that this arrangement is a good one, for if the hall was semipublic and was an eating hall for retainers it would be convenient to have "cellar" and pantry at hand.

A part of the hill was cut away to give a level floor for the hall and the adjoining rooms, and on the east the ground lies 6 or 8 feet higher. Here on the top of the hill no soil could accumulate to protect the ancient structure, and a careful scouring down to live rock simply proved that there had been nothing lower than the second-floor level between the hall and some narrow rooms of "magazine type" on the extreme eastern limit of the palace, where the land again descends, and that of the second story not even a vestige remains. To the south of the palace, as here described, lies a building of many rooms, which may form a southern wing (possibly the women's quarters) or may be the beginning of a block of houses. It

contains a bath with cement floor and stuccoed wall, on which traces of red and yellow color are still visible, a small square court, several storerooms, and a deep cistern with water channel.

In all the more important parts of the palace squared blocks of soft limestone take the place of rubble; usual dimensions about 1.40 meters long, 90 centimeters wide, and 60 centimeters high. One block attains the length of 2.10 meters. These blocks are carefully trimmed on all sides, and are laid in a thin bed of clay, each course receding about 10 centimeters from the one below it. The outer fa' was covered with stucco, and we have some traces of its use on the inner walls also. On a block near the southwest corner the double ax of Zeus is carved, as at Knossos and Phaestos. We note also many reentrant angles, a feature of Cretan architecture of this period.

Of the shrine which lies in the center of the town, approached by a well-worn road of its own, I shall say very little, as it opens up too large a subject for discussion here. Not imposing as a piece of architecture, it is yet of unique importance as being the first "Mycenæan" or "Minoan" shrine discovered intact. The worshiper ascended three steps and, through a doorway 1.50 meters wide, entered an inclosure about 3 meters square, surrounded by walls half a meter thick and 50 to 60 centimeters high. The floor is of beaten earth. Lying near the top of the hill, our shrine has suffered much from the forces of nature. A wild carob tree growing within its bounds had partly destroyed and partly saved its contents, of which the more noteworthy are a low earthen table, covered with a thin coating of plaster, which stands on three legs and possibly served as an altar; four cultus[a] vases bearing symbols of Minoan worship, the disk, consecrated horns and serpent, a terra-cotta female idol entwined with a snake, two heads of the same type as the idol, several small clay doves and serpents' heads, all of coarse terra cotta, and a fragment of a pithos, on which a double-ax and disk are modeled in relief. These were huddled together in the northeast corner; the rest of the shrine was entirely empty of finds, and nothing stood in the recess at the southwest corner, although this seems to correspond to the shelf in the shrine more recently discovered at Knossos, on which were found many offerings.

[a] I have called them "cultus" vases, and such I do believe them to be in spite of Wide's article on Mykenische Götterbilder, in Idole Athenische Mitthellungen, XXVI, 1901, pp. 247-257, in which he calls similar objects from Prinia "idols." These resemble ring stands found in Egypt, and with their slightly flaring rims would conveniently hold bowls. Objects with the same rings, flaring bases, and flaring rims have been found at Orchomenos and elsewhere in Greece and the islands, but none of this height. The Gournia vases are furnished with two opposite sets of upright loops, with an upright handle between them.

BULL'S HEAD.

Length of head 12 cm., width across forehead about 0.07 cm. Hollow with a flat back, as if to fit against a wall, 14 cm. long by 9½ cm. wide. The gray clay is medium fine, and even seems to have been covered in greater part with a shining white slip, as if to imitate silver, touched up with black and in certain places with a red pigment. Well modeled. A hole, depth 0.8 cm., in the end of the nose; second hole, depth 2 cm., in top of head. Horns and eyes broken.

Of tombs we have as yet found no trace at Gournia, although vigorous search has been made for them, but we have signs of intramural burial on the north spur of the acropolis, where within an inclosure resembling a house we uncovered the bottoms of three casellas (average length 1 meter), together with many human bones, three bronze knives, and a thin tip piece of beaten gold, without pattern, as large as the end of a thumb. Fragments of two other casellas were unearthed about 7 meters north of this point. But on this north spur of the acropolis the soil is never more than 30 centimeters deep, and this readily explains why of the casellas only the bottoms and 5 or 6 centimeters of the sides were preserved, why the bones were scattered, and why no more objects were found with them. Within the north room of house 6 on the west road, 1 meter below the surface, we came upon a better preserved casella decorated with a link pattern of debased type, and close to it a grotesque mourning female figure in coarse terra cotta similar to figures found in Cypriot tombs. I believe that these objects were deposited in this house at a period distinctly later than that of the settlement itself, and it may be that the casellas on the north spur are also late, although too little remains to establish a proof.

FEBRUARY, 1904.

Crete. By E. H. Bunbury, M.A.

C. R. april 66.

recent civil wars, "Crete is indeed the garden of Greece, and were it thoroughly civilized and cultivated, would produce in vast abundance corn, wine, oil, silk, wool, honey, and wax. The land is stocked with game, the sea with fine fish; fruit is plentiful, and of a delicious flavour: its valleys are adorned with a variety of flowers and aromatic shrubs, and with groves of myrtle, orange, lemon, pomegranate, and almond trees, as well as with interminable forests of olives. The southern coast is destitute of ports, and has scarcely any safe roadsteads; but on the northern side are several excellent and capacious harbours." Great part of the island, it is true, is occupied by lofty ranges and masses of mountains, that rise to a height exceeding the most elevated of those of continental Greece, and are, even under the thirty-fifth parallel of latitude, covered with snow for at least two-thirds of the year. But bordering on, and alternating with, these rugged mountain tracts, which abound in scenery of the most picturesque and varied character, are valleys and plains of surpassing richness and beauty. An old English traveller who visited the island in the beginning of the seventeenth century, while it was still under the Venetian rule, breaks out into raptures concerning the plain that surrounds Canea, of which he says, in his quaint style, that "it may easily be surnamed the garden of the whole universe, being the goodliest plot, the diamond spark, and the honey spot of all Candy."

An island possessing such great natural advantages, and situated at the very entrance of the Archipelago, as it were a stepping-stone from Europe both to Asia and Africa, would seem to be marked out by nature to exercise a commanding influence over the whole eastern Mediterranean. Yet it is certain that Crete has never played a part in history comparable to that of the neighbouring island of Rhodes, so far inferior to it both in extent and population. Even in ancient times we hear singularly little about it; its traditions of mythical times were indeed numerous; and the legends of Minos, his naval power and his wise legislation, would seem to point to a bygone period, when Crete held a position far more important in relation to the Hellenic world than at any subsequent time. But all such visions of departed splendour are peculiarly untrustworthy, and the mythical glories of Crete must, we fear, be consigned to the same limbo of historic doubt with those of Troy or the "seven-gated" Thebes. A more substantial source of pride was derived from the fact that the Cretans possessed, even in historical times, laws and institutions that were ranked amongst the wisest in Greece, and which are compared both by Plato and Aristotle with those of Sparta. According to one tradition, indeed, the latter had been in great part borrowed by Lycurgus from the legislation already existing in Crete.

But however much these institutions may have contributed to the

internal tranquillity and prosperity of Crete, they did nothing to give her power or consideration in her relations with other states. No trace can be found of any federal organization or permanent union among the different cities of the island, obvious as the formation of some such union would appear to our modern ideas. Every city had its own republican government, and formed alliances or waged wars with its neighbours at its own free will; and the few incidental glimpses we obtain of Cretan history show that such internal wars were of common occurrence. Hence, doubtless, it arose that an island of such magnitude and importance, which seemed calculated by its position, as Aristotle himself remarks,* to obtain the supreme command of the Grecian seas, and by that means of Greece itself, never plays any part of importance in Greek history. The Cretans, as a people, held aloof both from the Persian and Peloponnesian wars: they had no share in the dangers or the glories of the great contest with Xerxes; and appear to have looked on with unconcern at the long-protracted struggle for supremacy between Athens and Sparta: indeed, their name occurs only incidentally either in Thucydides or Xenophon. At a later period we find some passing notices of Cretan affairs in the extant fragments of Polybius—notices which all point to the same state of things,—a perpetual succession of petty wars among the cities of the island, arising from the same jealousies and ambition of supremacy that led to the more important and more celebrated contests of their continental countrymen. It was one of these disputes which first gave the opportunity for the intervention of the Romans in their affairs, which ended, as usual, by the complete subjugation of the whole island. Of the details of this war we know almost nothing, and we can only infer that the islanders must have opposed an obstinate and long-protracted resistance to the Roman arms, as the victorious general, a member of the proud house of the Metelli, already ennobled by so many triumphs, did not disdain to assume the surname of Creticus, in commemoration of his conquest of the island.

Throughout this period, however, while the Cretans, as a people, took no part in the wars or politics of the rest of Greece, they continued to furnish, like the Swiss in the Middle Ages, numbers of mercenary soldiers, which figure in almost all the contests of the continental Greeks. These troops were doubtless supplied for the most part from the mountainous districts of the interior, where the hardy and lawless race of the Sfakiotes still retain much of the same characteristics as their predecessors of old. The well-known Scolion, or drinking song, composed by the Cretan poet Hybrias, and supposed to represent the sentiments of one of these ancient soldiers of fortune,

* Polit., II. 7, 2.

breathes a spirit that would be recognised as congenial by the mountain freebooters of the present day, whether in Crete or the continental districts of Greece:—"My wealth is in my sword and spear, and the fair buckler that protects me from harm. With these I plough, with these I reap, with these I press the sweet wine from the grape."

But it was not on the sword and spear that the Cretan soldiers mainly relied: it was for their skill in the use of the bow that they were chiefly renowned in antiquity, and Cretan archers are continually found serving as mercenary auxiliaries, both in the Greek and Roman armies. So diligently, indeed, did they continue to practise the use of this favourite weapon, and so long did they retain it, that even under the Venetian Government it was still in general use among the Sfakian mountaineers, who are described by Foscarini, as late as 1596, as always carrying their bow and quiver of arrows, with which they shot "most excellently well."

As a province of the Roman Empire, Crete disappears altogether from history, though it is evident, from existing remains and inscriptions, that some of its towns at least must have enjoyed a considerable amount of wealth and prosperity. But all this, doubtless, came to an end when, in the general dissolution of the empire, the piratical invasions of the barbarians were extended to the sea as well as the land. Crete, however, continued to vegetate as a province of the Byzantine Empire until the ninth century, when it fell into the hands of the Saracens (about A.D. 820), who retained possession of the island for 140 years, till it was again wrested from them by the Greek Emperor, Nicephorus Phocas, in 961. In the partition of the Eastern Empire by the Franks, after the conquest of Constantinople, Crete appears to have been given to Boniface, Duke of Montferrat, and from him it passed by purchase to the Republic of Venice, in 1264.

It was during the long period of the Venetian rule in the island that the name of "Candia," originally applied to the capital city, and itself a corruption of the Arabic "Khandax" (a fortress or entrenchment), came gradually into use with the nations of Western Europe as the name of the whole island: a vulgar appellation which still retains its place in many of our maps and books of geography. But the ancient appellation of Crete is the only one that has ever been known in the island itself, and has always continued in use with Turks as well as Greeks. When Mr. Pashley visited Crete in 1834, he found that even the highest ecclesiastical dignitaries were wholly ignorant of the name of Candia, as applied to the island, and observes that in this sense "it has never been pronounced by any Cretan unacquainted with the Italian language."

The long struggle between the Venetians and the Turks for the possession of this important island, so essential to the maintenance of naval supremacy in the Archipelago, culminating at last in the celebrated siege of the city of Candia in 1667-69, gave for a time an European celebrity to its name, which gradually died away as the island sank under the lethargic influence of the Ottoman despotism. Crete was doomed to experience all the evils of that yoke in their most aggravated form, and became, according to the testimony of Mr. Pashley, "the worst-governed province of the Turkish empire:"—

"The local authorities were wholly unable to control the licence of the Janissaries, who consisted solely of Cretan Mohammedans, and made it a point of honour not to suffer any one of their number to be brought to justice for any ordinary crime. So completely did every pasha, appointed by the Sublime Porte, depend on this turbulent militia, that his authority always ceased as soon as they resisted it, which on several occasions they did, so far as even to depose him, and to send to Constantinople in order to obtain the confirmation of his successor's election, as made by themselves. In one or other of their regiments almost every Cretan Mohammedan was enrolled, and it is easy to conceive what must have been the condition of the Christian population. Besides the grinding oppressions of the regular authorities, and of the different corps of Janissaries, every Greek was also at the mercy of the lowest Mohammedan of the island, who, in consequence of the weakness of the local government, could make any demand and perpetrate any enormity with complete security. Thus, literally, no Christian was master of his own house: any Mohammedan might pass his threshold, and either require from him money, or, what was far commoner, send the husband or father out of the way, on some mere pretext, and himself remain with his wife or daughter. So atrocious and frequent were such acts of violence and oppression, that I have been assured by persons well acquainted with Turkey, and certainly favourably disposed to the Turks, that the horrors and atrocities which were almost of daily occurrence in Crete, had hardly a single parallel throughout the whole extent of the Ottoman Empire."

No wonder that, in 1821, when the standard of liberty was raised on the mainland of Greece, the Cretan Greeks enthusiastically followed the example of their brethren, and rose in revolt against their oppressors. Though opposed not only to the Turkish Pasha and the Mohammedan population of the island, but to the far more formidable power of Mehemet Ali, the Viceroy of Egypt, they maintained the contest with various alternations of success, and were in fact masters of the greater part of the island, when the decree of the Allied Powers, in 1829, while it established the liberty of the continental Greeks and the islanders of the Cyclades, handed over those of Crete to the Egyptian Viceroy. The short period of his rule, though in some respects more enlightened, was certainly not less tyrannical than had been that of the Porte. The promised introduction of "European institutions" was confined to that of European modes of taxation, which

grievously increased the burdens of the inhabitants, without giving them in return any of those advantages which the people ordinarily receive in the most heavily taxed countries of Europe. Crete had certainly little to lose by the exchange, when, after the fall of Acre and the overthrow of the Egyptian dominion in Syria, it passed once more (in 1841) under the direct dominion of the Sultan.

Previously to the publication of Captain Spratt's recent researches, our knowledge of Crete was almost wholly derived from the elaborate work of Mr. Pashley, who visited the island in 1834, and in the course of a prolonged tour examined almost every part of it. He brought to the exploration of its ancient remains the resources of a profound and accurate scholar, as well as a conscientious and diligent observer, while his remarkable command of the modern language and dialects of Greece enabled him to collect much interesting information concerning its present inhabitants and their condition. His book has consequently ranked ever since as the standard authority upon the subject, and has held its place by the side of those of Colonel Leake on continental Greece, and of Mr. Wm. Hamilton on Asia Minor. Unfortunately, for some reason that was never explained, his travels in certain portions of the island were not included in his published work, and several ancient sites, which we know that he visited, were left undescribed. Nor have the gaps thus left in our information been filled up by any subsequent traveller. A curious contribution to our knowledge of the antiquities of the island was indeed published by Mr. Falkener in 1854, in some extracts from the note-book of Onorio Belli, a Venetian architect, who visited the island in 1583, and made notes and plans of the ruins of ancient buildings then remaining, many of which have since been destroyed, either wholly or in part. There seems every reason to believe in the trustworthiness both of his plans and descriptions, and we thus obtain from this interesting record (which is still preserved in MS. in the Venetian archives) a curious proof how many ancient edifices survived through the Middle Ages to perish in comparatively recent times.

Captain Spratt has undoubtedly enjoyed great advantages for the completion of the task thus left unfinished. During the course of the elaborate survey of the coasts of Crete, on which he was engaged for several years in succession, and of which the main result is embodied in the beautiful charts of the island that form part of the noble survey of the Mediterranean Sea, executed under the directions of the British Admiralty, he was not only rendered familiar with every point of the sea-coast, but had the opportunity of making many tours through the interior of the island, and visiting every locality of interest either from its ancient remains or physical peculiarities. Of

the merits of Captain Spratt as a hydrographer it is impossible to speak too highly; and he has added to his claims on our gratitude on this account by presenting us with a general geological survey of the island, which derives additional interest from the resemblance of its leading characteristics to those of the neighbouring region of Lycia, where Captain Spratt had served his geological apprenticeship under the guidance of that highly-gifted naturalist and geologist, the lamented Edward Forbes.

Nor can we too much commend the diligence and energy with which Captain Spratt sought out the ancient remains, and evidences of ancient sites, with a view to complete or correct the topographical conclusions of his predecessors. Unfortunately, something more than zeal and energy is requisite in order to make any real progress in the thorny paths of ancient topography; and Captain Spratt was altogether deficient in the previous training requisite to enable any one to tread their mazes with security. His scholarship, indeed, appears to be confined, so far as we can gather from the volumes before us, to a diligent study of Dr. Cramer's well-known book on the Geography of Ancient Greece,—a useful compilation, as every student knows, though in many parts executed in a hasty and perfunctory manner, and nowhere more so than in this very portion relating to Crete, which was at that time in great measure unexplored and unknown. But Captain Spratt seems to regard the work of the Oxford Professor with something of the same reverence that we have known many tourists on the Continent evince for their "Murray,"—as an authority not to be questioned or disputed. Hence he is frequently disposed to censure Mr. Pashley for departing from the views of Dr. Cramer, even in cases where the former, having visited the localities himself, and compared the ancient authorities on the spot, was unquestionably right, and Dr. Cramer, writing without adequate information, as unquestionably wrong. On the whole, the result has been, that while Captain Spratt has furnished us with valuable additional materials for the future labours of scholars and topographers, his own views and suggestions have done little or nothing to advance our knowledge of the ancient geography of Crete.

Our readers will doubtless gladly excuse us from entering into these disputed questions, the more so as the remains of antiquity still visible in the island are of a kind interesting chiefly to the antiquarian or topographer. In no instance are there any monuments remaining calculated to attract general admiration by their architectural beauty, or imposing by the character of rude but massive grandeur, so conspicuous in the remains of Tiryns and Mycenæ. Two sites only may claim a passing notice, from their connection with the earliest mythological legends of the island. The tomb of Zeus, which

was shown by the "lying Cretans" in the flourishing days of Grecian mythology, to the great indignation of the pious Callimachus, is still pointed out by the rude shepherd at the present day on the summit of Mount Juktas, an isolated mountain that rises from the plain a few miles south of the city of Candia, and in full view of the harbour. The locality is marked only by some fragments of ancient walls, of very rude and massive masonry, enclosing a cave of small dimensions; but its identity seems to be well established, the spot having, as in many similar cases, continued to be the object of superstitious reverence long after the introduction of Christianity.

Another site that has been visited by all travellers in Crete is the famous Labyrinth, a subterranean gallery, or rather series of galleries, of most labyrinthine sinuosity, through which it must indeed be an arduous task to trace one's way without the clue of Ariadne. There is no doubt that it is an artificial excavation. Colonel Leake supposed it to be a catacomb, but Captain Spratt is probably correct in regarding it as nothing more than a vast quarry, excavated in the white tertiary limestone, which forms an excellent building material, not unlike the celebrated Malta stone, and evidently the same which was largely employed in the buildings of the neighbouring cities of Gortyna and Phæstos. But there is one grave difficulty in the way of identifying this supposed labyrinth with the famous work of Dædalus and the abode of the Minotaur. All the legends relating to the latter associate it with the city of Cnossus, the reputed capital of Minos; and, what is still more conclusive, the coins of Cnossus almost all bear the type of the labyrinth on the reverse, as the distinguishing emblem of their city, while no such symbol is found on those of Gortyna or any other city of Crete. But the labyrinth now extant is situated in the immediate neighbourhood of Gortyna, on the opposite side of the island from Cnossus, with which it could never have had any connection whatever. There can, therefore, be little doubt that the appellation is a mere misnomer as applied to the particular quarry in question, though it is not improbable that some excavation of a similar character in the neighbourhood of Cnossus,—the hills around which consist of the same soft limestone, and abound in natural caverns as well as rock-hewn sepulchres,—may have given rise to the notion of the fabulous structure so celebrated in antiquity.

We have already mentioned that a large portion of the island is occupied by mountains. A glance at Captain Spratt's admirable map will at once show the reader that these do not form a continuous chain, as they are represented on ordinary maps, but consist of several detached groups or masses, separated from one another by intervening tracts of plain or valley, or comparatively low hills of tertiary formation. The most westerly of these groups

is that of the White Mountains, now called the Madara Vouna, the highest peaks of which equal, if they do not exceed, in height the central summits of Mount Ida,* for which they have been often mistaken by voyagers as they approach the island from the coast of the Morea. Their highest summits are covered with snow till near midsummer; beneath the snow-line appears a scanty sprinkling of a kind of cypress (probably the *Juniperus excelsa* of botanists), while the extensive pastures and broad upland plateaux that border their flanks, accessible from below only by abrupt and difficult gorges, and ravines easily defended, have been the abode, from time immemorial, of a race of hardy mountaineers, who have retained their virtual independence in their mountain fastnesses through all the vicissitudes of centuries. These Sfakian highlanders, if they be not the lineal descendants of the "Eteocretes" of Homer, are certainly in one sense their modern representatives. They are "the genuine Cretans," the Cretans *par excellence*, a people who have changed so little from what they were two thousand years ago, that the scholar will find in their habits, their superstitions, even their dress, perpetual reminiscences of classical times. Their character and peculiarities are well described by Mr. Pashley, who enjoyed the advantage of visiting their villages, accompanied by a guide who was himself a Sfakian by birth, and possessed all the characteristics of that peculiar people.

Captain Manias, as this worthy was called, may be regarded as one of the notabilities of Crete. He had taken a leading part in the war of the revolution, in which he became a captain, having a considerable body of men under his standard. When the insurgents were for a time cowed into submission by Khusein Bey, he armed a light vessel, and made piratical descents on the coast of Crete, in the course of which he made prisoners, in the space of about two years, no less than sixty-four Mohammedans, whom he sold as slaves in the market of the neighbouring island of Kasos. "The life of war, rapine, and bloodshed which he had led," adds Mr. Pashley, "proved of the highest utility to me, for it had made him so well acquainted with every hill and dale, path and river in the island, that there were few parts of

* Captain Spratt's statements on this subject are singularly vague and fluctuating for one who had so long been engaged in an elaborate survey of the island. In his map, as well as on the original chart of the Admiralty survey, he gives the height of Mount Ida as 8,060 feet, and that of the highest peak of the White Mountains as 8,100 feet. Yet he himself states that Ida *exceeds* the latter *by a few feet*, while in the account of his ascent of Mount Ida, at the opening of his work, he says that its summit is 8,200 feet above the sea-level. Again, he tells us that he found by observation the height of Agio Pneuma, the only one of the peaks of the White Mountains which he ascended, to be about 7,800 feet above the sea, but that there were peaks "a few hundred feet" higher to the west. But the height assigned to Agio Pneuma on the map is only 7,650 feet. There is evidently still an opportunity in Crete for an enterprising member of the Alpine Club, with a good mountain barometer, to do useful service.

it where he would not have proved an unerring guide even at midnight." In other respects this wild warrior, who accompanied Mr. Pashley during the greater part of his travels in the island, proved himself not only an invaluable guide, but "a man who, though entirely destitute of education, was yet possessed of extraordinary abilities." We may add that he survived his travels with Mr. Pashley many years, and accompanied Captain Spratt on some of his excursions in the island, but died at Ierapetra, while acting as pilot to the surveying ship around the eastern coasts of the island, with which he had become familiar during his piratical cruises. Captain Spratt bears emphatic testimony to his noble qualities as well as his great abilities, but protests against his being taken for the type of a class.

This remarkable man seems, indeed, to have been the very ideal of the wild and lawless but noble-hearted mountaineer, such as Lord Byron would have loved to draw. "He was a specimen," says Captain Spratt, "of lion-hearted patriotism, combined with lamb-like gentleness in all the common intercourse of life; his form and constitution were herculean; but his manner was fascinating, and his voice he could modulate to a tone as soft and persuasive as that of a maiden." We can well believe that such romantic heroes as this are rare in the wild mountains of Sfakia as well as anywhere else.

We regret that we cannot introduce Captain Manias to our readers as he is presented to us by Mr. Pashley's artist, in full Cretan costume. A splendid figure he must have been, and fully justifies Captain Spratt's remarks on the picturesque effect of the Cretan style of dress. The great peculiarity of this, as distinguished from that of other Greeks, consists in the high, tight-fitting boots of leather, generally of a brown or red colour, sometimes bright scarlet, and often highly embroidered and laced. It is remarkable that these high boots, by which the Cretan is at once recognised among other Greeks, are noticed by Galen,* in the second century of the Christian era, as equally characteristic of the Cretans in his day. We know few instances of so permanent a fashion in any article of dress.

Notwithstanding his other merits, Captain Manias would, in one respect, have proved but an unsatisfactory *dragoman* to any traveller less familiar with the modern Greek dialects than Mr. Pashley. He spoke nothing but his native tongue, the peculiar Sfakian dialect, which differs so much, not only from ordinary modern Greek, but even from that spoken in other parts of Crete, as to be at first with difficulty intelligible, even to one familiar with the latter. Mr. Pashley has, in consequence, preserved to us some interesting specimens of this primitive dialect, in two or three songs which he took down from the mouth of his guide, and a curious story of a vampire, which he heard from the

* Cited by Pashley, vol. ii., p. 253.

peasants at Anopolis. As might be expected from their secluded position, the Sfakians have preserved in their dialect many Hellenic and old Doric words as well as forms, which had been wholly lost in the vernacular Romaic. The preservation of all such dialectic remains of the ancient language is an object of the highest interest to the philologist, and Captain Spratt has rendered a real service to that science by inserting in the Appendix to his first volume a vocabulary of Cretan Greek, compiled by a M. Khurmuzi, a native of the island, with the valuable addition of a dissertation on the relations of Cretan and modern Greek by that accomplished philologist, Viscount Strangford. We cannot but concur with the latter in his expression of regret that the rapid extension of the modern Greek educational system—meritorious as it is in many respects—should have the effect of displacing, —as it is rapidly doing even in Crete, with the exception of the mountain districts,—all traces of the popular dialect, thus "displacing a form of speech which might have been made to bear the same relation to classical Greek that Italian bears to Latin, and substituting in its stead a strange language, now perhaps unavoidable and past remedy, in which a revived or factitious ancient vocabulary is galvanized, rather than animated, by the idiom of modern French newspapers."

The White Mountains, as well as the summits of Mount Ida, are still frequented by the ibex, or wild goat, for which the island was celebrated in ancient times, and the figure of which is found as a characteristic symbol on the coins of several of its cities.* But the mountain shepherds, in these regions, have no occasion to guard their flocks from the attacks of wolves, so numerous and destructive on the mainland of Greece, no beast of prey more formidable than a fox or a badger being found in the island. Crete also enjoys the same immunity as many other large islands from the presence of snakes or other venomous reptiles. This privilege, which was granted to Ireland by St. Patrick, and to Malta by St. Paul, is ascribed in Crete to the favour of Titus, the companion of St. Paul, who, according to their ecclesiastical traditions, was the first archbishop of the island, and continued to be venerated as its patron saint, until, under the Venetian rule, his place was in some degree usurped by St. Mark. St. Titus is, however, still looked up to as their especial patron by all the Christian inhabitants of Crete.

The mountain group of Ida occupies as nearly as possible the centre of the island, and though not nearly so extensive as that of the White Mountains, is more imposing, from its more detached and commanding position. It is now known as Psiloriti, or Ypsiloriti (Ὑψηλορείτιον, a

* A considerable herd of them was seen by Captain Spratt during his ascent of Mount Ida; notwithstanding which, he elsewhere tells us that they are *exclusively confined* to the White Mountains.

curious kind of diminutive of ὕψηλον ὄρος, *the* high mountain *par excellence*), but the ancient name is still preserved in that of Nida, given to an extensive upland basin about 2,500 feet below the highest summit, affording a convenient halting-place for the traveller who ascends the mountain. The roots and branches of Mount Ida extend down to the sea, both on the north and south coasts, thus forming a natural barrier across the island. East of this is a broad tract of hilly —but not mountainous—country, comprising some of the finest and most fertile portions of Crete. It is here that were situated in ancient times the two rival cities of Cnossus and Gortyna,—the one within a few miles of the northern coast, the other on the southern slope of the hills. Here also is placed, immediately on the sea-coast, a few miles from the site of Cnossus, the modern city of Candia, or as it is called by the Greeks, Megalo Kastron, so long the capital of the island under the Venetians, and still the largest and most populous town in the island, though the dignity of the capital has been transferred by the Turks to Canea, or Khania, which occupies the site of the ancient Cydonia, about seventy miles farther to the west.

The eastern half of the island, east of Mount Ida, is again broken into two portions, united by a kind of isthmus of low land, not exceeding eight miles in breadth; and each of these is again marked by a group of mountains of considerable elevation, which send down their offshoots and branches on all sides to the sea, forming bold and rugged headlands, alternating with deep bays and occasional tracts of a softer and richer character.

It is this peculiar conformation of Crete—its long and narrow form, broken into various portions which seem to hang loosely together, and traversed in all directions by mountain ranges and ridges, sometimes descending abruptly to the sea, sometimes leaving a broad margin of fertile plain or rich valley—that undoubtedly contributed in ancient times to perpetuate its divided condition, and confirm that strong municipal spirit of self-government, which was one of the leading characteristics of the Greek mind. Doubtless the "hundred cities" of the island in the heroic ages, or even the ninety to which they are reduced by Homer in another passage, were a mere poetical or popular exaggeration. But the number of so-called "cities,"—that is to say, in the Greek acceptation of the word, towns forming independent communities, and enjoying full rights of self-government,—must have been strikingly great. Without attempting to enumerate the list of names collected by Stephanus of Byzantium, as well as by Pliny, Ptolemy, and other authors, many of which are obscure or uncertain, the number of cities of which authentic and autonomous coins have been preserved to us is not less than thirty-six; and though some of these may, for aught we know to the contrary, have been no larger than the

republics of Gersau or San Marino, many of them are sufficiently proved, by the number and variety and the artistic execution of their coins, as well as in some cases by the extent and character of their remains, to have been places of wealth and importance. We have already mentioned that there are no temples or other ruins still remaining in Crete that have retained enough of their architectural character to be striking to the uninitiated; but in many cases the remains of theatres and other public edifices, with numerous shattered columns of marble and of granite—the last of which must unquestionably have been brought from Egypt,—sufficiently attest the ancient opulence of the cities that once occupied these now-deserted sites. In other instances, on the contrary, there are found nothing but foundations of a very massive character, often of the polygonal, or so-called cyclopean style of masonry, without any indications of the site having been inhabited at any subsequent period. One of the most remarkable of these appears to be the site discovered by Captain Spratt, on the slopes of the Lasethe Mountains, and identified by him (on very questionable grounds) with that of the ancient Olus. But the correct attribution of such ruins, where neither coins nor inscriptions are discovered on the spot, must be always a matter of much uncertainty.

It is curious to compare these evidences of the ancient populousness of the island with its present condition. At the present day there are only *three* towns on the north coast of the island,—the two already mentioned, Candia and Canea, both of which were fortified and rebuilt by the Venetians, and the third, Retimo, intermediate between them, and the least considerable of the three. On the south coast, the only place that can be called a town is Ierapetra, which is proudly termed by Captain Spratt, "the fourth city of the island," though he himself adds that it is a poor, miserable place, with about 2,000 fever-stricken inhabitants. The ancient Hierapytna, of which it occupies the site and preserves the name, still exhibited in the sixteenth century (when it was visited by Onorio Belli), the remains of a naumachia, an amphitheatre, and two theatres, besides temples, thermæ, and aqueducts.

All estimates of the modern population of Crete must necessarily be extremely vague. Mr. Pashley, who seems to have taken great pains to obtain such information as was accessible, estimated the inhabitants of the island in 1834 at about 130,000; Captain Spratt computes them at the present day at 210,000, but his data for the calculation are, even on his own showing, of the most uncertain character. According to the information collected by Mr. Pashley, the population, previously to the outbreak of the revolution, had amounted to not less than 260,000 souls, so that the few years of the civil war had reduced the inhabitants to only about half their former numbers!

Nor must this estimate be taken as proving any remarkable prosperity at the former period; from official reports found in the Venetian archives, it appears, that although the inhabitants of Crete had at one period of the sixteenth century been reduced as low as 250,000, this was regarded as a proof of the great depopulation of the island, in consequence of the tyranny and oppression of its local governors. Whatever may have been the case in ancient times, it is certain that Crete might, at the present day, very well sustain a population of five or six hundred thousand souls.

Captain Spratt's volumes throw but little light upon the present condition of the island under its Turkish rulers—a subject upon which we should have gladly obtained some further information. He tells us, indeed, vaguely, "that on the whole there are few people in the Levant at the present time more free and independent, or less taxed and oppressed, than the Greek community of Crete;" and if any dependence can be placed upon the estimated increase in the numbers of the population, it is evident that there must have been considerable progress. But it is certain that at the time when he was in the island, the twenty-five years which had elapsed since the civil war had as yet but very imperfectly repaired the damage done by those long years of rapine and bloodshed. Upon this point Captain Spratt's testimony is distinct and explicit. Even in the rich plain of Khania, in the immediate vicinity of the present capital, he tells us that when once the traveller penetrates the grove of olives that covers the whole as seen from a distance, "the heart will soon grow sad at the numerous marks of devastation and ruin which everywhere meet him. Half populated villages, partially restored farms and dwellings, and the smoke-black windows and tottering walls of others in ruin, tell of the misery which has stalked through this fair land, the result of a merciless war of extermination between the two races and religions who possess it."—(Vol. ii., p. 162.) A little farther on he adds: "From what I have stated of the devastation and ruin, still so evident in the vicinity of the present capital of the island, and upon one of its most fertile spots, an idea can be formed of what exists in all the low country of Crete. Ruin meets the traveller in every village; the result of a devastating war lies impressed upon the face of the land, and upon many a countenance, still; and a sorrowful tale is ever ready for the ear."

The mode in which the war was carried on was indeed one of which the traces were not likely soon to be effaced. Startling as is Mr. Pashley's estimate that the population was diminished by one-half in consequence of the war,—including, it must be remembered, a very large emigration of the Greek population that took place when they found themselves, after all their efforts, placed once more under

a Mussulman yoke,—the details which he collected in his rambles through the island, while the memory of these events was still fresh in people's minds, are such as to render it not improbable. A few instances will suffice. The village of Episkope at the time of his visit, he tells us, consisted of about sixty dwellings: it had contained nearly three hundred at the outbreak of the revolution, thirteen years before. At Peghé, a village where about one hundred and sixty Greeks paid the poll-tax before the revolution, the number of inhabited houses did not exceed forty. Melidhoni before the Greek revolution contained one hundred and forty Christian and ten Mohammedan families,—about four times its population in 1834. In the plain of Mesará, one of the most fertile districts of the island, "the villages suffered greatly during the war. There were here no lofty and almost inaccessible mountains to flee to as a place of refuge. In most of the villages, full three-fourths of the houses are in ruins. One which formerly contained twenty houses has now only two." "'A single day,' observed Captain Manias, 'suffices for clearing a plain.'" Individual instances told the same tale. At the village of Arkhánes, where Mr. Pashley lodged, his host had lost his father and three brothers; his wife's father and one of her brothers had also been put to death by the Mohammedans, and the poor woman herself died of grief. But the most striking case of all is that of the family of the Kurmulidhes, one of the most illustrious in the island, who took an active part in the contest: out of sixty-four men of the family, *two* only survived the murderous war.

It must in fairness be added that the sufferings and losses of the contest were as severely felt by the Mohammedan inhabitants of the island as by the Greeks; indeed, if we are to judge from the general result, they would appear to have fallen upon them even more heavily than upon the Christians. According to Mr. Pashley's calculation, at the time of the outbreak of the war in 1821, about half the population of the island consisted of Mohammedans. Captain Spratt estimates them, at the present day, at not more than one-third, and attests the fact that here, as in most other parts of the Ottoman dominions, the number of the Christians is steadily increasing, and that of the Mohammedans gradually diminishing. A very small part of the latter are Turks; by far the largest proportion are of genuine Cretan race, whose forefathers were induced to abandon their creed and adopt that of Islamism, tempted by the worldly advantages held out to such apostasy when the island was wrested by the Turks from the Venetians. In many instances the change was at first merely external, and some families, especially that of the Kurmulidhes, already noticed, are said to have continued to profess Christianity in secret, and even to baptize their children as well as

circumcise them, from the period of the Turkish conquest till the outbreak of the Greek revolution. As a general rule, the new converts did not change their language with their creed, and hence Greek has continued to the present day to be the universal language of the island. In other respects, also, there is little difference between the Cretan Greeks and their Mohammedan compatriots, their common descent and use of a common language giving rise to a freedom of social intercourse between the two, greater than in any other part of the Turkish Empire. Even intermarriages between persons of different religions are not uncommon. "The Cretans of both creeds, too, dress so much alike, that the distinction is often not recognised by residents of long standing, or by Greeks from the neighbouring islands."

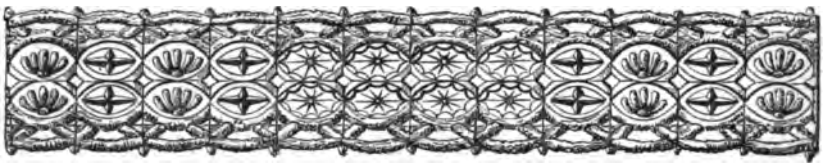
Under these circumstances, the period of tranquillity that succeeded the restoration of the Turkish power had, it is said, already done much to soften away the mutual antipathies between the adherents of the two creeds; but this process of amalgamation was in great measure interrupted by the revolutionary demonstration of the Greeks of the island in 1859,—a movement which originated with the wild Sfakian tribes of the mountains, and is represented by Captain Spratt as altogether unjustifiable and without excuse. It was at all events ill-timed and ill-advised, and like all premature attempts at revolution, tended to retard the very cause it was meant to advance. But we cannot wonder that this "mistaken and misguided patriotism," as it is termed by Captain Spratt, should be ever ready to blaze up afresh in the hearts of the Cretan Greeks. It would be difficult to conceive a more trying position than that in which they were placed by the result of the civil war. Their struggles for independence and freedom had certainly not been less resolute or less persevering than those of their neighbours on the mainland of Greece, nor had the war been stained by fewer of those atrocities that leave a feeling of mutual exasperation which generations will hardly efface. Crushed for a time by the overwhelming power of Mehemet Ali, they rose again more fiercely than before, after the battle of Navarino had given a check to his progress, and drove the Mussulman troops before them. "The Christians reaped the harvests of 1828 and 1829 unmolested by the Mohammedans, who were again cooped up within the walls of the fortified towns, and would soon, in all probability, either have abandoned the island, or perished in it, had not the three Allied Powers decided that Crete should be united to the Government of Mehemet Ali, and notified their decree to the Christian population."* Thus did the Cretan Greeks see themselves, at the very time when they were looking forward with confidence to the triumph of their cause, handed over once more

* Pashley, vol. ii., Introd., p. xxiii.

to the hated yoke of a Mohammedan governor, supported by a power which it was idle to think of resisting. That they should submit was a necessity; but it was not to be expected that they should rest contented.

It is true that the Turkish Government is not what it was before the revolutionary war. The Janissaries have disappeared; the irregular, vexatious oppression of their petty tyrants is more or less effectually controlled; their taxation may be light: but the longing for independence and self-government remains unsatisfied, and is fostered by the circumstance that the Cretan Greeks see their fellow-countrymen, almost within sight of their shores, enjoying that freedom for which they themselves fought so long without success. The Venetians are not more likely to acquiesce in the Austrian domination, now that the rest of Italy is free; nor can we expect the Greeks of Crete to submit patiently to the Turkish yoke, while they know that the islanders of the Cyclades have established their independence. It is vain to advise them to acquiesce patiently in the present state of things, and devote themselves to the advancement of their material prosperity. Under such circumstances the yoke of "the detested foreigner" weighs like an incubus upon the energies and spirit of a people; and even if its oppression were altogether as visionary, they cannot breathe freely till they have shaken it off. To the strength and universality of this feeling in the Greek population of the island, Captain Spratt is an unexceptionable witness; the more so because he seems to look upon all such aspirations with unfavourable eyes, and is clearly of opinion that their wisest course would be to bide their time in patience. "The one strong feeling," he tells us, "which ever rankles in the heart of a Cretan Greek is the hope that they will one day be freed from the government of their present masters." That day may be more or less distant; but we feel confident that it can hardly be very far removed. The separation of Crete from the other islands of the Archipelago at the time of the settlement of the Greek kingdom was one of those arbitrary acts, dictated by a temporary policy, that can only be defended on the score of the expediency of the moment. That policy has passed away; for it must be remembered that Crete was then assigned, not to the Porte, but to the Viceroy of Egypt, whom it was then thought desirable to uphold, but it was soon found necessary to humble. The reunion of Crete with the Morea and the islands of the Cyclades—the countries with which it has the closest geographical connection, as well as the most active relations—is one of those measures which cannot be long delayed, now that the English have set the example by yielding to the popular feeling in the case of the Ionian Islands.

E. H. BUNBURY.



PASTORAL WORK.

Directorium Pastorale. The Principles and Practice of Pastoral Work in the Church of England By the Rev. JOHN HENRY BLUNT Second Edition. London: Rivingtons. 1865.

THE Parish Priest has to fulfil a variety of duties which require in him a corresponding diversity of attainments. Supposing the all-important conditions to be fulfilled, that he is sincere and conscientious, that he sets forth his doctrine in his life, and that consequently he is a Christian gentleman,—he should also be a scholar and a divine, a good reader, a persuasive preacher, in the schoolroom apt to teach, in the sick chamber gentle and sympathizing, not wanting in tact and delicacy for the discernment and treatment of spiritual maladies, nor afraid of speaking unpalatable truths. He must have a deep knowledge of human nature, derived as well from intercourse with the world as from reflection on his own conduct and motives. He must be conversant with the management of secular business, able to preside at the meetings of his parishioners, and to administer the parochial charities. It is impossible that a book should instruct him fully in his multifarious duties, or forestall the teaching which he will receive from the exercise of his holy calling, and from conference with his clerical friends and neighbours. Yet even here a book may do him good service by laying down the principles which are to guide him in each of his ministrations, and by giving examples of the application of those principles to matters of detail. This useful purpose is, we think, to a great extent accomplished by Mr. Blunt's "Directorium Pastorale."

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Extrait des *Comptes rendus des séances de l'Académie des Inscriptions et Belles-Lettres*, 1908, p. 546.

INSCRIPTION BILINGUE MINÉO-GRECQUE

DÉCOUVERTE A DÉLOS

NOTE DE M. CLERMONT-GANNEAU

MEMBRE DE L'ACADÉMIE

Ce n'est pas la première fois que l'île de Délos a fourni à l'épigraphie sémitique une contribution inattendue. On se rappelle l'inscription bilingue[1], phénicienne et grecque, malheureusement très mutilée, qu'y a découverte, il y a quelque trente ans, notre savant confrère M. Homolle : une dédicace faite à l'Apollon délien par une théorie des hiéronautes de Tyr et de Sidon, sous le règne d'un de leurs rois nationaux répondant au nom de 'Abd'achtart, probablement un des Stratons des historiens classiques.

Je voudrais signaler brièvement aujourd'hui une nouvelle trouvaille qui vient d'y être faite et qui nous livre un autre document du même genre, mais encore plus imprévu ; car il nous reporte à l'une des extrémités les plus reculées du monde sémitique, dans cette partie de la péninsule arabique où florissait jadis la civilisation sabéenne. Il aurait fait la joie de notre regretté confrère M. Hartwig Derenbourg. C'est à lui, s'il eût été encore des nôtres, qu'il eût appartenu de tenir sur les fonts baptismaux, en attendant son immatriculation définitive dans la section IV du *Corpus*

1. *Corp. Inscr. Semitic.*, I, n° 114.

Inscription bilingue, sabéenne et grecque, découverte à Délos.

Inscriptionum Semiticarum, où il occupera une place d'honneur, ce nouveau-né de l'épigraphie sabéenne recueilli au fond d'un des berceaux les plus vénérables de l'antiquité hellénique. On m'excusera si je me permets, à son défaut, d'assumer une tâche qui me fait sortir un peu du terrain de mes études habituelles.

Au cours de la dernière campagne des fouilles entreprises à Délos par les membres de notre École d'Athènes, grâce à l'inépuisable libéralité de notre généreux confrère M. le duc de Loubat, on a exhumé, au milieu de matériaux antiques réemployés, une sorte de cippe en pierre, de forme tronc-conique, sur lequel sont gravées trois lignes de caractères appartenant à l'alphabet dit « himyarite » et, au-dessous, assez irrégulièrement disposées, quatre courtes lignes de caractères grecs. M. Hatzfeld, de l'École d'Athènes, a bien voulu me remettre, de la part de son directeur M. Holleaux, un estampage de l'ensemble de ces textes, en me confiant le soin de les examiner. Il m'a envoyé depuis la note suivante, extraite de son carnet de fouilles, sous la date du 18 août :

Base tronc-de-conique avec moulure en bas et en haut, et trou de scellement à la partie supérieure. Hauteur, 0m 57; diamètre en bas (avec la moulure), 0m 40; en haut, 0m 325. Hauteur des lettres, 0m 035 (lettres grecques, 0m 016). Trouvée dans une maison récente au N.-O. de l'Agora de Théophanès.

Il serait très désirable d'avoir des dessins et des photographies de ce monument qui, comme on va le voir, offre un intérêt exceptionnel, car il nous apporte le premier exemple connu d'une inscription bilingue sabéenne et grecque. Sous le bénéfice des renseignements complémentaires qui me manquent encore, je crois pouvoir avancer dès maintenant que nous avons affaire, non pas à quelque base de statue ou de colonne, mais bien à un véritable

autel. C'est, du moins ce qui me paraît ressortir de la teneur explicite du texte sémitique tel que je le comprends. Le mot sabéen מדבח, qui est employé, nous indique même qu'il s'agit d'un autel destiné non pas aux simples offrandes telles que libations, encensements, etc., mais aux sacrifices sanglants. Il devait être surmonté d'un dispositif aujourd'hui disparu, mais dont l'existence est attestée par le trou de scellement pratiqué à la partie supérieure.

Voici la reproduction de l'estampage gravée photographiquement au..... de l'original. Je la fais suivre de la transcription des deux parties sémitique et grecque et d'une traduction que j'essaierai ensuite de justifier :

1 חדב | די | וזידאל | הנא | ??ח 1
2 ואלאלת | ודם | מדבה | נצב 2
3 Ὀδδου, מען | בדלת 3
4 θεοῦ
5 Μιναίων.
6 Ὀάδδῳ.

[Sabéen] — *?? H. Hané'(?) et Zaidil, de Kh-dh-b (Khidâb?), ont érigé l'autel de Ouadd(m) et des dieux de Me'in, à Délos.*

[Grec] — *De Oddos, dieu des Minéens.*
A Oaddos.

Je m'occuperai d'abord de la partie grecque. Bien que très laconique et visiblement accessoire, elle a l'avantage de nous fixer d'emblée non seulement sur l'identité du dieu auquel est faite la dédicace, mais encore sur la nationalité propre des dédicants, sans parler des indices paléographiques qu'elle nous fournit pour dater approximativement le monument; indices qui ont en l'espèce une valeur considérable, car ils introduisent un facteur chronologique peut-être

décisif dans le grand problème, encore si débattu, de l'âge relatif des anciens royaumes qui se sont succédé dans l'Arabie méridionale avant l'ère chrétienne.

Par la façon même dont il est disposé au-dessous du texte sémitique, il est évident que le grec, bien qu'en rapport étroit avec celui-ci, a été gravé après lui. Les trois premières lignes, qui se composent chacune d'un seul mot, sont calibrées sur la justification finale des lignes sémitiques[1]; la première ligne grecque utilise même le vide disponible laissé par la troisième ligne sémitique. Par contre, la quatrième ligne grecque, consistant également en un seul mot, s'écarte sensiblement de l'horizontale et est gravée obliquement à une notable distance du premier groupe; il faut considérer ce mot ainsi isolé comme constituant à lui seul un second groupe additionnel, et en quelque sorte indépendant du précédent. Le tout peut se ramener à deux formules de dédicace, réduites à leur plus simple expression :

a) Dans la première, le nom du dieu au génitif : « de Oddos », suivi d'un déterminatif de l'ordre ethnique : « dieu des Minéens » ;

b) Dans la seconde, le nom de ce même dieu, sans plus, mais répété cette fois au datif, et avec une légère variante vocalique dont nous chercherons dans un instant la raison d'être.

Dans la première formule, le génitif absolu est commandé par un substantif sous-entendu, impliquant l'idée d'appartenance; celui qui convient le mieux ici, c'est le mot βωμός « autel », qui définit le monument même portant les inscriptions et que nous retrouverons formellement spécifié dans la partie sémitique. Il faut donc comprendre : « (autel) de Oddos, dieu des Minéens ». Je restitue sans hésiter le nominatif en Ὄδδος, et non en Ὄδδης auquel on pourrait aussi

1. A proprement parler, sur celle de la seconde, qui est la plus longue.

bien songer de prime abord pour la transcription du nom de ce dieu exotique. Cette première forme nous est, en effet, garantie par le datif Ὀάδδῳ qui apparaît ensuite et est commandé par un autre mot sous-entendu, impliquant cette fois l'idée, non plus d'appartenance, mais de consécration faite au dieu.

Comment se fait-il que ce dieu soit appelé, la première fois Ὄδδος, la seconde fois Ὄαδδος? On pourrait être tenté d'attribuer cette variation, qui se produit à si bref intervalle, à quelque erreur de lapicide, la succession des caractères similaires ΔΔ et ΑΔΔ ayant pu prêter à confusion. Mais on aurait tort de s'arrêter à cet expédient. Nous avons certainement ici — le contexte sémitique nous le prouvera — la transcription du nom du grand dieu national des Sabéens et, en particulier, des Mînéens, nom qui figure très fréquemment dans leurs inscriptions sous la forme ודו ou, avec la *mimmation* marquant l'état indéterminé, ודם. On est généralement d'accord pour vocaliser ainsi cette forme : *Ouadd* (*Ouadd*^{m}), en s'appuyant avec raison sur l'autorité de l'arabe qui a gardé le souvenir et le nom de cette vieille divinité sabéenne sous la forme de وَدّ, *Ouadd*. Mais, à côté de cette vocalisation, l'arabe nous en a conservé une autre : وُدّ, *Ououdd* ou *Ouodd*, laquelle, par suite, est tout aussi légitime que la précédente. C'est à ces deux formes concurrentes que nous avons affaire ici, à mon avis. Cette fluctuation n'est pas pour nous surprendre, étant donné ce que nous savons de l'organe sémitique en matière vocalique; en tout cas, elle est expressément attestée en ce qui concerne notre dieu. Il est particulièrement intéressant de la saisir sur le fait dans notre document grec où Ὄδδος correspond très exactement à *Ouodd*, *Oodd*, et Ὄαδδος à *Ouadd*. On remarquera, en outre, que ces transcriptions fixent avec quelque précision la nuance de la prononciation telle qu'elle existait dans ce dialecte sabéen, et à cette époque, à savoir la prédominance du son *o* sur le

son *ou* qu'on admettait jusqu'ici. Enfin, elles vérifient la réduplication du *d* qui, par suite des errements de l'écriture sémitique, n'était que virtuellement justifiable.

La transcription du nom des Minéens que nous avons dans notre document n'est pas moins instructive. Elle tranche la question posée par les variantes des manuscrits des divers auteurs grecs qui ont parlé de ce peuple : Μιναῖοι, Μεινᾶιοι, Μηναῖοι, Μιννᾶιοι. Cette dernière forme, avec le ν redoublé, est décidément à rejeter, et la forme Μιναῖοι revêt maintenant un caractère d'autorité indéniable. Elle nous donne, d'autre part, à réfléchir sur la façon dont on vocalise habituellement la forme originale de ce nom dans les inscriptions sabéennes : מעין *Ma'în*[1]. Il faut avouer qu'elle n'est guère favorable à cette vocalisation en *a* de la première syllabe. Il serait peut-être plus judicieux d'admettre une voyelle vague, une sorte de *cheva* ou *e* muet pouvant disparaître facilement dans la prononciation : *Me'în*, *M''în*. Qui sait même si la voyelle en question n'était pas un *i* véritable, impliquant une forme originale *Mi'în*, voire *Mi'in ?*

Si l'on tient compte des diverses particularités paléographiques et orthographiques du texte grec (Α à barre brisée, Ο avec point central, forme et module du Μ, du Ω et du Ο, *apices* aux extrémités des éléments rectilignes, absence du *iota* adscrit, etc.), on est amené à le classer au IIe siècle avant notre ère, et plutôt peut-être dans la seconde moitié que dans la première. Il va de soi que ce diagnostic chronologique est applicable à la partie sémitique, les deux textes, en relation étroite comme on va le voir, étant indubitablement contemporains. J'essaierai tout à l'heure de montrer le parti que l'on peut tirer de ce critérium pour l'élucida-

1. Je ne parle que, pour mémoire de la transcription *Ma'ân*, qui est encore maintenue par quelques savants, mais qui doit être définitivement écartée.

tion du problème sabéen auquel j'ai fait allusion plus haut.

J'arrive maintenant à l'examen du texte sémitique. L'écriture est celle qu'on appelle couramment himyarite et dont se servaient en commun les divers groupes ethniques de l'Arabie méridionale constituant la grande famille sabéenne. Rien, à première vue, n'indique auquel de ces groupes pouvaient appartenir l'auteur ou plutôt les auteurs de la dédicace. La langue même de l'inscription n'offre aucune de ces caractéristiques philologiques qui, dans de certaines conditions grammaticales, permettent de distinguer l'un de l'autre les principaux dialectes de cette famille : le sabéen proprement dit, le qatabanite, le minéen, etc. Par un effet du hasard, ces conditions ne se rencontrent justement pas ici. Toutefois l'hésitation n'est pas permise. Notre inscription est une inscription minéenne. A lui seul le grec suffirait à nous en avertir, puisqu'il nous apprend que la dédicace est faite au « dieu des Minéens »; et la chose va nous être amplement confirmée par le texte sémitique lui-même.

L. 1. Seul, le début de l'inscription présente quelque obscurité portant sur l'interprétation des trois premiers signes. Les deux premiers n'ont pas l'aspect de caractères alphabétiques. Ils rappellent plutôt, surtout le premier, ces espèces de monogrammes qu'on trouve assez souvent au commencement des inscriptions sabéennes et dont la valeur n'est pas encore déterminée. La troisième est bien une véritable lettre, un ה; mais je doute qu'il fasse partie intégrante du contexte suivant. Ces trois signes, en effet, sont gravés pour ainsi dire en manchette, en dehors de l'alignement général et même à un niveau légèrement inférieur par rapport à celui de l'axe normal de la ligne. De plus, ils semblent être séparés du corps même de l'inscription par un vide assez marqué. Tout nous invite donc à les consi-

dérer comme formant un groupe à part. S'il en est bien ainsi, l'inscription proprement dite commencerait seulement au quatrième caractère. Celui-ci, malheureusement, est indistinct par suite, soit de l'insuffisance de l'estampage en cette région, soit de l'état même de la pierre. On peut hésiter entre מ, י, ח et ה, selon que l'on tient compte ou que l'on fait abstraction de tel ou tel trait plus ou moins incertain. Ce que l'on peut affirmer, c'est que, quelle que soit la lecture adoptée, nous avons affaire à un nom propre de personne terminé par les deux lettres, certaines celles-là, נא. La chose est mise hors de doute par le mot suivant qui, précédé de la conjonction ו, est le nom d'un second dédicant : « *X* et Zaidil ». Si la première lettre à enquerre du premier nom est un ה, nous obtiendrions un nom excellent : הנא. *Hané'* ou *Hani'*, que nous rencontrons fréquemment dans l'onomastique sabéenne et qui a aussi de bons répondants dans les autres branches de la famille sémitique [1].

Quant au nom de *Zaidil*, il est bien connu et se passe de commentaire. Je me bornerai à faire remarquer qu'il se retrouve, entre autres, dans l'épitaphe du sarcophage minéen découvert en Égypte dont je dirai un mot tout à l'heure.

די est le duel de la particule ד, ذو, marquant ici l'origine des deux dédicants : « qui sont tous deux originaires de ». Cette forme grammaticale vient confirmer la dualité que j'attribue à la dédicace.

חדב est sûrement un nom de lieu : *KH-DH-B*. Nous sommes trop peu renseignés sur la contrée habitée par les Minéens pour prétendre déterminer l'identité de la localité. Peut-être pourrait-on en rapprocher le خِذام *Khidâm* que le géographe Yâqoût [2] signale comme un point d'eau dans le territoire des Beni Esed, dans le Nejd. Le *m* final arabe

1. Cf. le nabatéen הנאו, arabe هانئ, palmyrénien הנאי, safaïtique הני.

2. *Mo'djem*, s. v. : ماء في ديار بني اسد بنجد.

correspond souvent à un *b*[1] sabéen, d'où l'on est autorisé à induire l'existence d'une forme intermédiaire *Khidâb*. Pour ce qui est de la position géographique, si l'on objecte que le Nedjd est trop éloigné de l'habitat généralement assigné, avec plus ou moins de certitude, aux Minéens, on peut toujours admettre le rapprochement au titre homonymique.

L. 2. נצב. Jusqu'à présent, du moins à ma connaissance, nous n'avions en sabéen que le substantif tiré de cette racine : « pierre érigée, cippe ». Ici nous avons le verbe même : « ériger ». Ce verbe est virtuellement au duel, « ont (tous deux) érigé », bien qu'aucune désinence ne nous en avertisse et qu'il affecte l'aspect de la 3e personne masculin singulier du parfait. Nous n'avons pas, dans le dialecte minéen, d'exemple du duel de la 3e pers. masc. du parfait. En sabéen ordinaire, on marque ce duel par l'addition de la désinence ן[2]; parfois même on emploie simplement la désinence du pluriel ו[3]. L'absence. ici, de toute désinence peut s'expliquer de deux façons :

a) Ou bien le verbe est mis à la forme pure et simple du singulier. Cette indifférence grammaticale répondrait assez bien aux errements propres du minéen où souvent le verbe est maintenu au singulier malgré la pluralité des sujets.

b) Ou bien notre verbe נצב se termine par un *a* virtuel[4], non exprimé dans l'écriture, et indice du duel, à l'instar de l'arabe نصبا « ont (tous deux) érigé ».

Tous les autres mots de l'inscription sont parfaitement

1. Sur cette équivalence *b*=*m*, voir les observations de D. H. Müller, *ZDMG*, t. XXX, p. 703-705. Ajouter le nouvel exemple reconnu par Prætorius, *id.*, t. LIV, p. 37 (גרב = جرم.

2. Cf. Hommel, *Süd-arab. Chrestom.*, p. 22, 23.

3. Cf. par exemple *Répertoire d'épigr. sémit.*, n° 627 : החדתו « ont (tous deux) renouvelé ».

4. Cf. Hommel, *l. c.*, qui admet, par voie d'hypothèse, l'existence d'un a virtuel de même espèce à la fin de la forme, encore inconnue, de la 3e pers. fém. sing. du parfait. A considérer toutefois l'objection élevée récemment contre cette vue par M. Mayer Lambert (*Journ. asiat.*, 1908, I, p. 321).

clairs et déjà connus. Inutile d'y insister. A remarquer seulement la façon très intéressante dont est transcrit le nom de l'île, Δῆλος : *D-L-TH*, avec l'emploi du ת, analogue au *th* anglais, pour rendre la sifflante pure *sigma*. L'analogie est frappante avec l'épitaphe du sarcophage minéen d'Égypte où le nom Πτολεμαῖος est transcrit semblablement, à trois reprises : תלמיתּ (*P*)-*T-L-M-I-TH*[1].

Et maintenant comment expliquer la présence à Délos de Zaidil et de son compatriote? Par suite de quel concours de circonstances ces deux Sabéens sont-ils venus du fond de la péninsule arabique se fixer, s'échouer, pourrait-on dire, dans l'île sainte de Latone, d'Apollon et d'Artémis?

Il n'est guère présumable qu'ils y aient été attirés par quelque motif de piété. Si grand que fût le renom du sanctuaire délien, il ne suffirait pas à justifier un pèlerinage à si longue portée. La dédicace de nos deux Sabéens vise exclusivement leurs dieux nationaux. Elle ne contient pas un seul mot de politesse à l'adresse des divinités helléniques dont ils étaient cependant les hôtes. Ils ne pensaient qu'à leur patrie absente. Ce silence me paraît être significatif. Je crois que nous avons tout bonnement affaire à deux négociants en résidence à Délos pour leur *business*. Délos n'était pas seulement un grand centre religieux, c'était aussi, nous le savons, un grand centre commercial, dont l'importance s'était encore accrue depuis la ruine de Corinthe en l'an 146 avant notre ère. C'est justement aux environs de cette date que tend à nous reporter, nous l'avons vu, la paléographie de la partie grecque de notre document.

Dans cet entrepôt de la mer Égée affluaient de toute

1. A noter que dans cette même épitaphe le *TH* minéen est également employé pour rendre la sifflante égyptienne dans la transcription du nom divin *Osiris* = אתר. Le phénicien, au contraire, se sert dans les mêmes cas des sifflantes normales, אסר, פתלמיס, פתלמיש.

part les produits de l'Orient, importés souvent directement des pays d'origine par les producteurs eux-mêmes. C'est à cette dernière catégorie que devaient, à mon avis, appartenir Zaidil et son associé. L'objet propre de leur négoce est facile à deviner. C'étaient, selon toute probabilité, ces parfums précieux, ces aromates, ces épices, etc., qui étaient si estimés des anciens et que l'Arabie méridionale leur fournissait en abondance, soit qu'elle les tirât de son propre sol, soit qu'elle les importât elle-même de l'Inde et autres parages plus lointains encore. L'épitaphe minéenne du sarcophage d'Égypte dont j'ai parlé plus haut prête, à cet égard, à un rapprochement des plus instructifs. Nous y voyons paraître un Zaidil, compatriote et même homonyme du nôtre, qui se vante d'avoir été de son vivant, sous le règne d'un Ptolémée malheureusement indéterminé[1], un

1. Il est dit dans cette épitaphe que le défunt a vécu sous le règne de Ptolémée, fils de Ptolémée... (lacune au début de la l. 2), qu'il est mort au mois de Hathor (l. 2), et qu'il a été enseveli, selon les rites égyptiens, au mois suivant, de Koihak, en l'an 22 de Ptolémée le roi (l. 3).

Dans la lacune initiale de la l. 2, après les mots « Ptolémée fils de Ptolémée », devait se trouver quelque titre dont la disparition est d'autant plus regrettable qu'il nous aurait peut-être permis de fixer notre choix entre les Ptolémées — ils sont nombreux — qui comptent au moins 22 ans de règne. Toutes les hypothèses qui ont été émises à ce sujet doivent être écartées, car elles reposent sur une lecture erronée des caractères ou restes de caractères qui apparaissent au sortir de la lacune. J'ai montré autrefois, en m'occupant de cette inscription (*Recueil d'arch. orient.*, t. II, p. 11), que le dernier caractère ne pouvait pas être, comme on l'admettait, un *samek;* qu'il fallait distraire un élément du complexe pour en faire la barre disjonctive, indispensable entre les mots, et qu'il nous restait en conséquence un *raw* suivi d'une lettre mutilée comportant un seul jambage vertical. Ayant eu, depuis, l'occasion d'examiner au Musée du Caire le monument original, j'ai pu vérifier l'exactitude de ce déchiffrement ainsi rectifié. M. Max Müller, qui ne semble pas l'avoir connu, est arrivé de son côté à peu près aux mêmes conclusions paléographiques sur le vu de l'original (*Orientalist. Litt. Z.*, 1907, col. 573). Il fait seulement erreur sur l'identité de l'avant-dernier caractère qui, étant donné son module, est certainement un *waw* et non pas un *'ain* comme il le croit. J'avais pensé, à l'origine, à restituer une transcription de Φύσκων, surnom de Ptolémée VIII. Mais je renonce maintenant à cette idée pour plus d'une raison. Il est difficile d'évaluer l'étendue réelle de cette lacune initiale, par suite

grand importateur de myrrhe et de calamus, fournisseur attitré des sanctuaires égyptiens. Est-il trop téméraire de supposer que nos Sabéens de Délos devaient s'y livrer, à peu près à la même époque, à des opérations commerciales du même genre? On conçoit aisément que des importateurs entreprenants, encouragés par les résultats déjà obtenus dans l'Égypte ptolémaïque, aient eu l'idée de pousser plus loin encore au delà de cette dernière étape et d'installer un comptoir de leurs spécialités arabiques dans ce grand emporium de Délos dont la réputation était sûrement venue jusqu'à eux par l'intermédiaire d'Alexandrie et où ils pouvaient à bon droit espérer s'ouvrir de nouveaux et lucratifs débouchés [1].

de la forme du sarcophage arrondi en cet endroit. Elle est au maximum de 6 à 7 lettres; mais elle pourrait n'être que d'environ 3 lettres, si l'on admet que la ligne 2 ne commençait qu'au niveau de la l. 3. En tout cas, vu l'analogie de l'expression de la l. 3 (« Ptolémée le roi »), je crois que nous devions avoir là, avant tout, le titre nécessaire מלכן ou מלך, à l'état soit déterminé, soit construit : « le roi » ou « roi de ». Je n'ose proposer de restituer le mot suivant en (י)(ו)ן *Yavan*, « roi des Grecs », non plus qu'en מקד[ו](ו)ן, « Macédoniens ». Encore moins pourrait-on songer à מלכ[ו](ן), forme insolite de duel qui viserait les deux Ptolémées, père et fils.

Cette inscription présente encore plus d'un point obscur. J'en ai discuté quelques-uns dans la notice précitée. Je n'y reviendrai pas. Je me bornerai à ajouter que le nom de lieu מירן pourrait peut-être être rapproché, au moins au point de vue toponymique, du nom de l'île de *Tirân*, dans la mer Rouge (au débouché du golfe de ʿAqaba).

1. Sur les relations commerciales de l'Égypte et de l'Arabie à l'époque ptolémaïque et impériale, en particulier sur l'importation et l'exportation des parfums, l'impôt de la ἀρωματική, etc., cf. la récente étude de M. Rostowzew (*Archiv f. Papyrusforsch*, t. IV, p. 298 et suiv.).

Je ne crois pas inutile, à ce propos, de signaler un intéressant petit monument que j'ai eu l'occasion de voir, lors de mon dernier passage au Caire (avril 1908), entre les mains d'un marchand d'antiquités. C'est un alabastrum en forme de flacon étroit et allongé, portant l'inscription suivante gravée sur la panse, un peu au-dessous du col :

KINNAMWNON
ΓΑΡΑΚΡΙΝΙΠΠΟΥ

κιννάμωνον, παρὰ Κρινίππου

Cinnamone, de chez Krinippos.

Il ne me reste plus, en terminant, qu'à indiquer d'un trait, sans prétendre dans cette note sommaire en mesurer toute la portée, la donnée capitale que notre inscription bilingue introduit dans l'histoire générale de l'Orient antique. A vrai dire, c'est là ce qui constitue sa principale valeur. D'après une doctrine qui est très en faveur surtout dans l'école allemande et qui compte parmi ses adhérents principaux MM. Glaser, Hommel, Winckler, Weber, etc., le royaume minéen, antérieur au royaume sabéen, aurait été supplanté par celui-ci et aurait disparu vers la fin du VIIIe siècle avant notre ère. Or, voici que surgit aujourd'hui un document irrécusable attestant l'existence, au IIe siècle, de Minéens qui rendent officiellement hommage sur la terre étrangère à leur dieu suprême, au dieu « des Minéens » — θεοῦ Μιναίων, et aux autres divinités « minéennes » — לאלתא מען. Ils affirment ainsi par conséquent, de la façon la plus expresse, qu'ils ont encore pleine conscience et pleine jouissance de leur nationalité. Si à ce moment la nationalité minéenne était chose abolie depuis cinq siècles au bas mot, ainsi que le prétend la théorie préconisée en Allemagne, comment concevoir que ces Minéens avérés s'en réclament aussi catégoriquement?

Sur cette doctrine aventureuse on a voulu naguère édifier tout un système d'hypothèses intimement liées aux plus graves problèmes de l'exégèse biblique. Tout cet échafaudage se trouve singulièrement ébranlé par l'intervention de l'élément nouveau que nous apporte la bilingue de Délos. Il va falloir en rabattre de l'antiquité surfaite dont l'école en question gratifiait, pour les besoins de la cause, le royaume minéen, et, en général, les divers monuments de la civilisation sabéenne. J'ai toujours eu, pour ma part, le sentiment qu'on se laissait entraîner par un mirage en voulant échelonner sur une très longue suite de siècles ces monuments qui, en réalité, sont peut-être au contraire à resserrer dans des limites chronologiques assez étroites.

N'a-t-on pas même été jusqu'à soutenir que c'était dans l'écriture sabéenne qu'il fallait chercher le véritable et plus ancien prototype de l'alphabet sémitique? Comment concilier une telle affirmation avec le fait si frappant de l'invariabilité presque absolue de l'alphabet sabéen depuis les inscriptions minéennes réputées les plus vieilles jusqu'aux inscriptions himyarites les plus récentes? L'expérience nous apprend que toute écriture évolue forcément au cours des siècles. L'écriture sabéenne qui serait restée si semblable à elle-même pendant plus d'un millier d'années constituerait une exception vraiment étrange. Je la crois beaucoup plus jeune, et comme date de naissance et comme longévité, que ne l'admettent les protagonistes d'une thèse désormais bien compromise. Déjà l'épitaphe du sarcophage ptolémaïque que j'ai citée à plusieurs reprises aurait dû leur ouvrir les yeux. Mais on ne semble guère avoir tenu compte de ce premier avertissement; on avait toujours la ressource d'alléguer que l'emploi du dialecte minéen dans cette épitaphe était le fait d'une survivance d'ordre purement linguistique, n'impliquant pas une survivance d'ordre ethnique et politique. Il n'en va pas de même avec la bilingue de Délos, dont les auteurs se présentent à nous sans ambages, en plein IIe siècle, comme des Minéens authentiques et autonomes.

MACON, PROTAT FRÈRES, IMPRIMEURS

THE MINOAN AND MYCENAEAN ELEMENT IN HELLENIC LIFE

BY

ARTHUR J. EVANS

FROM THE SMITHSONIAN REPORT FOR 1913, PAGES 617–637
(WITH PLATES 1–3)

(PUBLICATION 2305)

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[With 3 plates.]

In his concluding address to this society our late president remarked that he cared more for the products of the full maturity of the Greek spirit than for its immature struggles, and this preference for fruits over roots is likely to be shared by most classical scholars. The prehistoric civilization of the land which afterwards became Hellas might indeed seem far removed from the central interests of Greek culture, and it was only with considerable hesitation that I accepted, even for a while, the position in which the society has placed me. Yet I imagine that my presence in this chair is due to a feeling on its part that what may be called the embryological department has its place among our studies.

Therefore I intend to take advantage of my position here to-day to say something in favor of roots, and even of germs. These are the days of origins, and what is true of the higher forms of animal life and functional activities is equally true of many of the vital principles that inspired the mature civilization of Greece—they can not be adequately studied without constant reference to their anterior stages of evolution. Such knowledge can alone supply the key to the root significance of many later phenomena, especially in the domain of art and religion. It alone can indicate the right direction along many paths of classical research. Amidst the labyrinth of conjecture we have here an Ariadnê to supply the clue. And who, indeed, was Ariadnê herself but the great goddess of Minoan Crete in her Greek adoptive form qualified as the most holy?

"The chasm," remarks Prof. Gardner, "dividing prehistoric from historic Greece is growing wider and deeper."[2] In some respects perhaps—but looking at the relations of the two as a whole I venture to believe that the scientific study of Greek civilization is becoming

[1] From the address of the president delivered to the Hellenic Society, June, 1912. Reprinted by permission from The Journal of Hellenic Studies, London, vol. 32, pt. 2, 1912, pp. 277–297.

[2] J. H. S., xxxi (1911), p. lix.

less and less possible without taking into constant account that of the Minoan and Mycenaean world that went before it.

The truth is that the old view of Greek civilization as a kind of "enfant de miracle" can no longer be maintained. Whether they like it or not, classical students must consider origins. One after another the "inventions" attributed by its writers to the later Hellas are seen to have been anticipated on Greek soil at least a thousand years earlier. Take a few almost at random: The Aeginetan claim to have invented sailing vessels, when such already plowed the Aegean and the Libyan seas at the dawn of the Minoan age; the attribution of the great improvement in music, marked by the seven-stringed lyre, to Terpander of Lesbos in the middle of the seventh century B. C.—an instrument played by the long-robed Cretan priests of Hagia Triada some 10 centuries before, and, indeed, of far earlier Minoan use. At least the antecedent stage of coinage was reached long before the time of Pheidôn, and the weight standards of Greece were known ages before they received their later names.

Let us admit that there may have been reinventions of lost arts. Let us not blink the fact that over a large part of Greece darkness for a time prevailed. Let it be assumed that the Greeks themselves were an intrusive people and that they finally imposed their language on an old Mediterranean race. But if, as I believe, that view is to be maintained it must yet be acknowledged that from the ethnic point of view the older elements largely absorbed the later. The people whom we discern in the new dawn are not the pale-skinned northerners—the "yellow-haired Achaeans" and the rest—but essentially the dark-haired, brown-complexioned race, the Φοίνικες or "Red men" of later tradition, of whom we find the earlier portraiture in the Minoan and Mycenaean wall paintings. The high artistic capacities that distinguish this race are in absolute contrast to the pronounced lack of such a quality among the neolithic inhabitants of those more central and northern European regions, whence ex hypothesi the invaders came. But can it be doubted that the artistic genius of the later Hellenes was largely the continuous outcome of that inherent in the earlier race in which they had been merged? Of that earlier "Greece before the Greeks" it may be said, as of the later Greece, capta ferum victorem cepit.

It is true that the problem would be much simplified if we could accept the conclusion that the representatives of the earlier Minoan civilization in Crete and of its Mycenaean outgrowth on the mainland were themselves of Hellenic stock. In face of the now ascertained evidence that representatives of the Aryan-speaking race had already reached the Euphrates by the fourteenth century B. C. there is no a priori objection to the view that other members of the same linguistic group had reached the Aegean coasts and islands at an even

earlier date. If such a primitive occupation is not proved, it certainly will not be owing to want of ingenuity on the part of interpreters of the Minoan or connected scripts. The earliest of the Cretan hieroglyphs were hailed as Greek on the banks of the Mulde. Investigators of the Phaestos disk on both sides of the Atlantic have found an Hellenic key, though the key proves not to be the same, and as regards the linguistic forms unlocked it must be said that many of them represent neither historic Greek, nor any antecedent stage of it reconcilable with existing views as to the comparative grammar of the Indo-European languages.[1]

The Phaestos disk, indeed, if my own conclusions be correct, belongs rather to the eastern Aegean coast lands than to prehistoric Crete. As to the Minoan script proper in its most advanced types—the successive linear types A and B—my own chief endeavor at the present moment is to set out the whole of the really vast material in a clear and collective form. Even then it may well seem presumptuous to expect that anything more than the threshold of systematic investigation will have been reached. Yet, if rumor speaks truly, the stray specimens of the script that have as yet seen the light have been amply sufficient to provide ingenious minds with a Greek—it is even whispered, an Attic—interpretation. For that it is not even necessary to wait for a complete signary of either of the scripts!

For myself I can not say that I am confident of any such solution. To me at least the view that the Eteocretan population, who preserved their own language down to the third century before our era, spoke Greek in a remote prehistoric age is repugnant to the plainest dictates of common sense. What certain traces we have of the early race and language lead us in a quite different direction. It is not easy to recognize in this dark Mediterranean people, whose physical characteristics can be now carried back at least to the beginning of the second millennium before our era, a youthful member of the Aryan-speaking family. It is impossible to ignore the evidence supplied by a long series of local names which link on the original speech of Crete and of a large part of mainland Greece to that of the primitive Anatolian stock, of whom the Carians stand forth as, perhaps, the purest representatives. The name of Knossos itself, for instance, is distinctively Anatolian; the earlier name of Lyttos—Karnessopolis—contains the same element as Halikarnassos. But it is useless to multiply examples, since the comparison has been well worked out by Fick and Kretschmer and other comparative philologists.

[1] I especially refer to some of the strange linguistic freaks of Dr. Hempl. Prof. A. Cuny has faithfully dealt with some of these in the Revue des Études Anciennes, T. XIV (1912), pp. 95, 96. The more plausible attempt of Miss Stawell leaves me entirely unconvinced.

When we come to the religious elements the same Asianic relationship is equally well marked. The great goddess of Minoan Crete had sisters east of the Aegean even more long-lived than herself. The Korybantes and their divine child range in the same direction, and the fetish cult of the double axe is inseparable from that of the Carian labrys which survived in the worship of the Zeus of Labraunda.

Some of the most characteristic religious scenes on Minoan signets are most intelligible in the light supplied by cults that survived to historic times in the lands east of the Aegean. Throughout those regions we are confronted by a perpetually recurrent figure of a goddess and her youthful satellite—son or paramour, martial or effeminate by turns, but always mortal, and mourned in various forms. Attis, Adonis, or Thammuz, we may add the Ilian Anchises,[1] all had tombs within her temple walls. Not least, the Cretan Zeus himself knew death, and the fabled site of his monument on Mount Juktas proves to coincide with a votive shrine over which the goddess rather than the god originally presided. So too, on the Minoan and Mycenaean signets we see the warrior youth before the seated goddess, and in one case actually seem to have a glimpse of the "tomb" within its temenos. Beside it is hung up the little body shield, a mourning votary is bowed toward it, the sacred tree and pillar shrine of the goddess are hard by.[2] In another parallel scene the female mourner lies prone above the shield itself, the divine connection of which is shown by the sacred emblems seen above, which combine the double axe and life symbol.[3]

Doubtless some of these elements, notably in Crete, were absorbed by later Greek cult, but their characteristic form has nothing to do with the traditions of primitive Aryan religion. They are essentially non-Hellenic.

An endeavor has been made, and has been recently repeated, to get over the difficulty thus presented by supposing that the culture exemplified by the Minoan palaces of Crete belongs to two stages, to which the names of "Carian" and "Achaean" have been given. Rough and ready lines of division between "older" and "later" palaces have been laid down to suit this ethnographic system. It may be confidently stated that a fuller acquaintance with the archeological evidence is absolutely fatal to theories such as these.

The more the stratigraphical materials are studied, and it is these that form our main scientific basis, the more manifest it appears that

[1] "Tombs" of Anchises—the baetylic pillar may also be regarded as sepulchral—were erected in many places, from the Phrygian Ida to the sanctuary of Aphrodite at Eryx.

[2] See my "Mycenaean Tree and Pillar-Cult" (J. H. S., 1901), pp. 81, 83, and p. 79, fig. 53.

[3] Op. cit., p. 78, fig. 52.

while on the one hand the history of the great Minoan structures is more complicated than was at first realized, on the other hand the unity of that history, from their first foundation to their final overthrow, asserts itself with ever-increasing emphasis. The periods of destruction and renovation in the different palaces do not wholly correspond. Both at Knossos and at Phaestos, where the original buildings go back well nigh to the beginning of the middle Minoan age, there was a considerable overthrow at the close of the second middle Minoan period. Another catastrophe followed at Knossos at the end of the third middle Minoan period. At Phaestos, on the other hand, the second, and in that case the final, destruction took place in the first late Minoan period. The little palace of Hagia Triada, the beginnings of which perhaps synchronize with those of the second palace of Phaestos, was overthrown at the same time, but the Minoan sovereigns who dwelt in the later palace of Knossos seem to have thriven at the expense of their neighbors. Early in the second late Minoan period, when the rival seats were in ruins, the Knossian Palace was embellished by the addition of a new façade, on the central court of which the room of the throne is a marvelous surviving record. At the close of this second late Minoan age the palace of Knossos was finally destroyed. But the tombs of Zafer Papoura show that even this blow did not seriously break the continuity of local culture, and the evidence of a purely Minoan revival in the third late Minoan age is still stronger in the new settlement of Hagia Triada, which may claim the famous sarcophagus as its chief glory. There is no room for foreign settlement as yet in Crete,[1] though the reaction of mainland Mycenæan influences made itself perceptible in the island [2] toward the close of the third late Minoan period.

Here then we have a story of ups and downs of insular life and of internecine struggles like those that ruined the later cities of Crete, but with no general line of cleavage such as might have resulted from a foreign invasion. The epochs of destruction and renovation by no

[1] There is no foundation for the view that the later oblong structure at Hagia Triada is a megaron of mainland type. The mistake, as was pointed out by Noack (Ovalhaus und Palast in Kreta, p. 27, n. 24) and, as I had independently ascertained, was due to the omission of one of the three cross walls on the Italian plan. By the close of the Minoan age in Crete (L. M. III, *b*) the mainland type of house seems to have been making its way in Crete. An example has been pointed out by Dr. Oelmann (Ein Achäisches Herrenhaus auf Kreta, Jahrb. d. Arch. Inst. xxvii (1912), p. 38, seqq.) in a house of the reoccupation period at Gournià, though there is no sufficient warrant for calling it "Achaean." It is also worth observing that one of the small rooms into which the large "megaron" of the "Little Palace" at Knossos was broken up in the reoccupation period has a stone-built oven or fireplace set up in one corner. This seems to represent a mainland innovation.

[2] This concluding and very distinctive phase may be described as late Minoan III, *b* (see preceding note) and answers at Knossos to the period of reoccupation, L. M. III, *a*, being represented there by the cemetery of Zafer Papoura, which fills a hiatus on the palace site. Judging from figures on very late lentoid bead seals in soft material (steatite), the long tunic of mainland fashions was coming in at the very close of the Minoan age in Crete.

means synchronize in different Minoan centers, but when we come to regard the remains themselves as stratified by the various catastrophes it becomes evident that they are the results of a gradual evolution. There is no break. Alike in the architectural remains and in the internal decorations, in every branch of art the development is continuous; and though the division into distinct periods stratigraphically delimited is useful for purposes of classification, the style of one phase of Minoan culture shades off into that of another by imperceptible gradations. The same is true of the remains of the early Minoan periods that lie behind the age of palaces, and the unity of the whole civilization is such as almost to impose the conclusion that there was a continuity of race. If the inhabitants of the latest palace structures are to be regarded as "Achaeans," the Greek occupation of Crete must, on this showing, be carried back to Neolithic times. A consequence of this conclusion—improbable in itself—would be that these hypothetical Greeks approached their mainland seats from the south instead of the north.

Who would defend such a view? Much new light has recently been thrown on the history of the mainland branch of the Minoan culture at Mycenae by the supplementary researches made under the auspices of the German Institute at Athens, at Tiryns, and Mycenae. It is now clear that the beginnings of this mainland plantation hardly go back beyond the beginning of the first late Minoan period—in other words, long ages of civilized life in Minoan Crete had preceded the first appearances of this high early culture on the northern shores of the Aegean. From the first there seems to have been a tendency among the newcomers to adapt themselves to the somewhat rougher climatic conditions, and, no doubt in this connection, to adopt to a certain extent customs already prevalent among the indigenous population. Thus we see the halls erected with a narrower front and a fixed hearth, and there is a tendency to wear long-sleeved tunics reaching almost to the knees. An invaluable record of the characteristic fashions of this Mycenaean branch has been supplied by the fresco fragments discovered at Tiryns from which, after long and patient study, Dr. Rodenwaldt has succeeded in reconstructing a series of designs.[1]

These frescoes are not only valuable as illustrations of Mycenaean dress but they exhibit certain forms of sport of which as yet we have no record in Minoan Crete, but which seem to have had a vogue on the mainland side. The remains of an elaborate composition representing a boar hunt is the most remarkable of these, and though belonging to the later palace and to a date parallel with the third late Minoan period shows extraordinary vigor and variety. Cer-

[1] In course of publication.

tainly one of the most interesting features in this composition—thoroughly Minoan in spirit—is the fact that ladies take part in the hunt. They are seen driving to the meet in their chariots, and following the quarry with their dogs. Atalanta has her Mycenaean predecessors, and the Kalydonian boar hunt itself may well represent the same tradition as these Tirynthian wall paintings.

But the point to which I desire to call your special attention is this: In spite of slight local divergences in the domestic arrangements or costume, the "Mycenaean" is only a provincial variant of the same "Minoan" civilization. The house planning may be slightly different, but the architectural elements down to the smallest details are practically the same, though certain motives of decoration may be preferred in one or the other area. The physical types shown in the wall paintings are indistinguishable. The religion is the same. We see the same nature goddess with her doves and pillar shrines; the same baetylic worship of the double axes; the same sacral horns; features which, as we now know, in Crete may be traced to the early Minoan age. The mainland script, of which the painted sherds of Tiryns have now provided a series of new examples, is merely an offshoot of the earlier type of the linear script of Crete and seems to indicate a dialect of the same language.

In the palace history of Tiryns and Mycenae we have evidence of the same kind of destruction and restoration that we see in the case of those of Minoan Crete. But here, too, there is no break whatever in the continuity of tradition, no trace of the intrusion of any alien element. It is a slow, continuous process of decay, and while at Tiryns the frescoes of the original building were replaced in the second palace by others in a slightly inferior style, those of the Palace of Mycenae, to a certain extent at least, as Dr. Rodenwaldt has pointed out, survived its later remodeling, and were preserved on its walls to the moment of its destruction.

The evidence as a whole must be regarded as conclusive for the fact that the original Minoan element, the monuments of which extend from the Argolid to Thebes, Orchomenos, and Volo, held its own in mainland Greece till the close of the period answering to the third late Minoan in Crete. At this period no doubt the center of gravity of the whole civilization had shifted to the mainland side, and was now reacting on Crete and the islands—where, as in Melos, the distinctive "Mycenaean" megaron makes its appearance. But the return wave of influence can not, in the light of our present knowledge, be taken to mark the course of invading hordes of Greeks.

Observe, too, that in the late Minoan expansion which takes place about this time on the coasts of Canaan the dominant element still seems to have belonged to the old Aegean stock. The settlement of Gaza is "Minoan." Its later cult was still that of the indigenous

Cretan god. In Cyprus, again, the first Aegean colonists brought with them a form of the Minoan linear script, and a civilization which sufficiently proclaims their identity with the older stock.

We must clearly recognize that down to at least the twelfth century before our era the dominant factor both in mainland Greece and in the Aegean world was still non-Hellenic, and must still unquestionably be identified with one or other branch of the old Minoan race. But this is far from saying that even at the time of the first appearance of the Minoan conquerors in the Peloponnese, or, approximately speaking, the sixteenth century B. C., they may not have found settlers of Hellenic stock already in the land. That there were hostile elements always at hand is clearly shown by the great pains taken by the newcomers at Tiryns, Mycenae, and elsewhere to fortify their citadels, a precaution which stands out in abrupt contrast to the open cities and palaces of Crete. In the succeeding period, that of the later Palace of Tiryns, we find on the frescoes representing the boar-hunting scene—dating perhaps from the thirteenth century B. C.—the first definite evidence of the existence of men of another and presumably subject race existing side by side with the Mycenaean. An attendant in a menial position, apparently helping to carry a dead boar, is there depicted with a yellow skin in place of the conventional red, which otherwise indicates the male sex. Is it possible that the paler color was here chosen to indicate a man of northern race?

That there was in fact in the Peloponnese a subject race of Hellenic stock during the whole or a large part of the period of Mycenaean domination is made highly probable by certain phenomena connected with the most primitive of the Greek tribes, namely the Arcadians, whose religion and mythology show peculiar affinities with those of Minoan Crete. Shortly after the break up of the Mycenaean society, during the period of invasion and confusion that seems to have set in about the eleventh century B. C., men of Arcadian speech (who must then have been in possession of the Laconian coast lands) appear in Cyprus in the wake of their former masters, and this Cypriote offshoot affords the best evidence of the extent to which this primitive Greek population had been penetrated with Minoan influences. The very remote date of this settlement is established by the important negative fact that the colonists had left their mainland homes before the use of the Phœnician alphabet was known in Greece. Considering the very early forms of that alphabet at the time when it was first taken over by the Greeks, this negative phenomenon may be taken to show that the Arcadian colonization of Cyprus took place before 900 B. C. The positive evidence seems to indicate a still higher date. Thus the fibulae and vases of the early tombs of the Kuklia Cemetery at Paphos show a distinct parallelism

with the sub-Mycenaean types from those of the Greek Salamis, and point to an impact on Cyprus from the mainland side about the eleventh century before our era, which may well have been due to the advent of the Pre-Dorian colonists from the Laconian shores. These, as we know from inscriptions, brought with them local cults, such as that of Amyklae; but what is especially interesting to observe is the whole-hearted way in which they are seen to have taken over the leading features of the Minoan cult. Fanassa, the Queen, the Lady of the Dove, as we see her at Paphos, Idalion or Golgoi, is the great Minoan goddess. The Paphian temple to the end of the chapter is the Minoan pillar shrine. Were all these Minoan features taken over in Cyprus itself? May we not rather infer that, as the colonists arrived, with at least a sub-Mycenaean element in culture, so too they had already taken over many of the religious ideas of the older race in their mainland home? In the epithet "Ariadnê" itself, applied to the goddess both in Crete and Cyprus, we may perhaps see an inheritance from a pre-colonial stage.

In Crete, where Hellenic colonization had also effected itself in pre-Homeric times, the survival of Minoan religion was exceptionally great. The nature goddess there lived on under the indigenous names of Diktynna and Britomartis. A remarkable example of the continuity of cult forms has been brought to light by the Italian excavation of a seventh century temple at Prinià, containing clay images of the goddess with snakes coiled round her arms, showing a direct derivation from similar images in the late Minoan shrine of Gournià and the fine faïence figures of considerably earlier date found in the temple repositories at Knossos. At Hagia Triada the earlier sanctuary was surmounted by one of Hellenic date, in which, however, the male divinity had now attained prominence as the youthful Zeus Velchanos. As Zeus Kretagenes, he was the object of what was regarded in other parts of the Greek world as a heterodox cult. But in spite of the jeers of Kallimachos at the "Cretan liars" who spoke of Zeus as mortal, the worship persisted to late classical times and points of affinity with the Christian point of view were too obvious to be lost. It is at least a highly suggestive fact that on the ridge of Juktas, where the tomb of Zeus was pointed out to Byzantine times and on a height above his birth cave little shrines have been raised in honor of *Αἰθεντὴς Χριστὸς*—Christ, the Lord.

In view of the legendary connection of Crete and Delphi, illustrated by the myth of the Delphian Apollo, the discovery there by the French excavators of part of a Minoan ritual vessel has a quite special significance. This object, to which M. Perdrizet first called attention, forms part of a marble rhyton in the form of a lioness's head of the same type, fabric, and material as those found with other

sacred vessels in a chamber adjoining the central shrine of Knossos. It clearly proves that at Delphi, too, the religion of the spot goes back to Minoan times and stands in close connection with a Cretan settlement.

How profoundly the traditions of Minoan and Mycenaean religion influenced the early cult of Greece has been nowhere illustrated more clearly than by the excavations of the British school at Sparta. A whole series of the types of ivory figurines there found are simply derivatives of the scheme of the Minoan goddess with her associated birds and animals. It was the same in Ionia. The Ephesian Artemis has the same associations as the lion goddess of Knossos, and among the jewels found by Mr. Hogarth in the Temple Treasure occur miniature representations of her double axe.

I will venture to point out another feature which the advanced religious art of Greece inherited from Minoan prototypes, such as those which influenced the Spartan ivories. The lions' gate scheme, appropriate to its position in a tympanum, is only one of a series of Late Minoan schemes of the same kind in which the central figure—either the divinity itself or (as in the above case) a sacred column, which as the pillar of the house, stands as the epitome of the temple—is set between two heraldically opposed animals.

Seal impressions from the palace shrine of Knossos show the Minoan goddess in this guise standing on her peak between her lion supporters. The same idea is carried out in a variety of ways on Minoan gems and signets.

The Mycenaean element in Doric architecture itself is generally recognized, but I do not think that it has been realized that even the primitive arrangement of the pediment sculptures goes back to a prehistoric model. That the gabled or pedimental front was itself known in Minoan times may be gathered from the designs of buildings on some intaglios of that date acquired by me in Crete (fig. 1 *a*, *b*).[1] When we realize that the pediment is in fact the functional equivalent of the tympanum on a larger scale, it is natural that an arrangement of sculpture appropriate to the one should have been adapted to the other.

In recently examining the remains of the pedimental sculptures from the early temple excavated by Dr. Dörpfeld at Palaeopolis in Corfù, which have now been arranged by him in the local museum (fig. 2),[2] the observation was forced upon me that the essential features of the whole scheme were simply those of the Mycenaean tympanum. The central divinity is here represented by the Gorgon, but on either side are the animal guardians, in this case apparently pards,

[1] The gem fig. 1*a* is from Central Crete (steatite). 1*b* is from Siteia (cornelian).

[2] Fig. 2 is taken from a diagrammatic sketch kindly supplied me by Mr. J. D. Bourchier, which accompanied his account of these discoveries in the Times.

heraldically posed. Everything else is secondary, and the scale of the other figures is so small that at a moderate distance, all including Zeus himself, disappear from view. The essentials of the architectural design were fulfilled by the traditional Minoan group. The rest was a work of supererogation.

The fragment of a sculptured lion found in front of the early sixth century temple at Sparta was clearly part of a pedimental scheme of the same traditional class.

The extent to which the Minoans and Mycenaeans, while still in a dominant position, impressed their ideas and arts on the primitive Greek population itself argues a long juxtaposition of the two elements. The intensive absorption of Minoan religious practices by the proto-Arcadians previous to their colonization of Cyprus, which itself can hardly be later than the eleventh century B. C., is a crucial instance of this, and the contact of the two elements thus involved itself implies a certain linguistic communion. When, reinforced by fresh swarms of immigrants from the northwest, the Greeks began to get the upper hand, the position was reversed, but the long previous interrelation of the two races must have facilitated the work of fusion. In the end, though the language was Greek, the physical characteristics of the later Hellenes prove that the old Mediterranean element showed the greater vitality. But there is one aspect of the fusion which has a special bearing on the present subject—an aspect very familiar to those who, like myself, have had experience of lands where nationalities overlap. A large part of its early population must have passed through a bilingual stage. In the eastern parts of Crete indeed this condition long survived. As late as the fourth century before our era the inhabitants still clung to their Eteocretan language, but we know from Herodotos that already in his day they were able to converse in Greek and to hand on their traditions in a translated form. It can not be doubted that at the dawn of history the same was true of the Peloponnese and other parts of Greece. This consideration does not seem to have been sufficiently realized by classical students, but it may involve results of a most far-reaching kind.

The age when the Homeric poems took their characteristic shape is the transitional epoch when the use of bronze was giving place to that of iron. As Mr. Andrew Lang well pointed out, they belong to a particular phase of this transition when bronze was still in use for weapons and armor, but iron was already employed for tools and implements. In other words the age of Homer is more recent than the latest stage of anything that can be called Minoan or Mycenaean. It is at most "sub-Mycenaean." It lies on the borders of the geometrical period, and though the archeological stratum with which it is associated contains elements that may be called "sub-Myce-

naean," it is, artistically speaking, a period of barbarism and degradation—a period when the great cities of whose rulers the poet sang had for some two centuries been heaps of ruins. The old art had passed away. The new was yet unborn.

"Homer" lies too high up in time for it to be admissible to seek for illustration among the works of renascent art in Greece, or the more or less contemporary importations, such as Cypro-Phœnician bowls of the seventh or sixth centuries B. C., once so largely drawn on for comparison. On the other hand, the masterpieces of Minoan and Mycenaean craftsmen were already things of the past in the days in which the Iliad and Odyssey took their organic form. Even the contents of the latest Mycenaean graves have nothing to do with a culture in which iron was already in use for cutting purposes and cremation practiced.

How is it, then, that Homer, though professedly commemorating the deeds of Achaean heroes, is able to picture them among surroundings which, in view of the absolute continuity of Minoan and Mycenaean history, we may now definitely set down as non-Hellenic? How explain the modes of combat borrowed from an earlier age and associated with huge body shields that had long been obsolete. Whence this familiarity with the court of Mycenae and the domestic arrangements of palaces that were no more?

I venture to believe that there is only one solution of these grave difficulties, and that this is to be found in the bilingual conditions which in the Peloponnese, at least, may have existed for a very considerable period. The Arcadian-speaking Greek population of that area, which apparently, at least as early as the eleventh century, before our era sent forth its colonists to Cyprus, had, as pointed out, been already penetrated with Minoan ideas to an extent which involves a long previous juxtaposition with the element that formerly dominated the country. They had assimilated a form of Minoan worship, and the hymns and invocations to the Lady of the Dove can hardly have been other than adaptations of those in use in the Mycenaean ritual—in the same way as the Greek hymn of the Dictaean Temple must be taken to reflect an original handed down by Eteocretan choirs.

We may well ask whether a far earlier heroic cycle of Minoan origin might not to a certain extent have affected the lays of the primitive Greek population. When, in a bilingual medium, the pressure of Greek conquest turned the scales finally on the Hellenic side, may not something of the epic traditions of the Mycenaean society have been taken over? Englishmen, at least, who realize how largely Celtic and Romance elements bulk in their national poetry should be the last to deny such a possibility. Have we not, indeed, the proof of it in many of the themes of the Homeric lays, as already

pointed out? They largely postulate a state of things which on the mainland of Greece existed only in the great days of Mycenae.

In other words, many of the difficulties with which we have to deal are removed if we accept the view that a considerable element in the Homeric poems represents the materials of an earlier Minoan epic taken over into Greek. The molding of such inherited materials into the new language and the adapting of them to the glories of the new race was no doubt a gradual process, though we may still regard the work in its final form as bearing the stamp of individual genius. To take a comparison from another field, the arch of Constantine is still a fine architectural monument, though its dignity be largely due to the harmonious incorporation of earlier sculptures. Not less does Homer personify for us a great literary achievement, though the materials that have been brought together belong to more than one age. There is nothing profane in the idea that actual translation, perhaps of a very literal kind, from an older Minoan epic to the new Achaean, played a considerable part in this assimilative process. The seven-stringed lyre itself was an heirloom from the older race. Is it, then, unreasonable to believe that the lays by which it was accompanied were inspired from the same quarter?

And here we are brought up before an aspect of Minoan art which may well stand in relation to the contemporary oral or literary compositions covering part of the Homeric ground. The Homeric aspect of some of its masterpieces has indeed been so often observed as to have become a commonplace. In some cases parts of pictorial scenes are preserved, such as primitive bards delight to describe in connection with works of art. The fragment of the silver vase with the siege scene from Mycenae affords a well-known instance of this. A similar topic is discernible in the shield of Achilles, but in this case a still nearer parallel is supplied by the combat on the shield of Heraklês, described by Hesiod. Here the coincidence of subject extends even to particular details, such as the women on the towers shouting with shrill voices and tearing their cheeks and the old men assembled outside the gates,[1] holding out their hands in fear for their children fighting before the walls. The dramatic moment, the fate of battle still hanging in the balance—so alien to oriental art—is equally brought out by the Mycenaean relief and by the epic description of the scene on the shield, and the parallelism is of special value, since it may be said to present itself in pari materia—artistic composition on metal work.

So too at Knossos there came to light parts of a mosaic composition formed of faïence plaques, and belonging to the latter part of the middle Minoan age. Parts of the composition, of which we have a

[1] *Ἀσπίς*, vv. 237 *sqq.* Cf. Tsuntas, *Ἐφ. Ἀρχ.*, 1891, pp. 20, 21, and *Μυκῆναι*, p. 94 (Tsuntas and Manatt, *Myc. Age*, pp. 214, 215).

fragmentary record, represent warriors and a city, like the siege scene on the silver cup. But we also have glimpses of civic life within the walls, of goats and oxen without, of fruit trees and running water suggesting a literal comparison with the Homeric description of the scenes of peace and war as illustrated on the shield of Achilles. These tours de force of Minoan artists were executed some five centuries before the Homeric poems took shape. They may either have inspired or illustrated contemporary epic. But if Greeks existed in the Peloponnese at the relatively early epoch, the close of the middle Minoan age or the very beginning of the late Minoan, to which these masterpieces belong, they must still have been very much in the background. They did not surely come within that inner palace circle of Tiryns and Mycenae, where such works were handled and admired in the spirit (with which we must credit their possessors) of cultivated connoisseurs. Still less is it possible to suppose that any Achaean bard at the time when the Homeric poems crystallized into their permanent shape had such life-like compositions before his eye or could have appreciated them in the spirit of their creation.

Again we have the remarkable series of scenes of heroic combat best exemplified by the gold signets and engraved beads of the shaft graves of Mycenae—themselves no doubt, as in like cases, belonging to an artistic cycle exhibiting similar scenes on a more ample scale, such as may some day be discovered in wall paintings or larger reliefs on metal or other materials. Schliemann,[1] whose views on Homeric subjects were not perturbed by chronological or ethnographic discrepancies, had no difficulty in recognizing among the personages depicted on these intaglios Achilles or "Hector of the dancing helmet crest," and could quote the Homeric passages that they illustrated. "The author of the Iliad and Odyssey" he exclaims, "can not but have been born and educated amidst a civilization which was able to produce such works as these." Destructive criticism has since endeavored to set aside the cogency of these comparisons by pointing out that, whereas the Homeric heroes wore heavy bronze armor, the figures on the signet are almost as bare as were, for instance, the ancient Gaulish warriors. But an essential consideration has been overlooked. The signets and intaglios of the shaft graves of Mycenae belong to the transitional epoch that marks the close of the third middle Minoan period, and the very beginning of the late Minoan age.[2] The fashion in signets seems to have subsequently undergone

[1] In the same way epitomized versions of the scenes on the Vapheio cups are found in a series of ancient gems. The taurokathapsia of the Knossos frescoes also reappears in intaglios, and there are many other similar hints of the indebtedness of the minor to the greater art, of which the "Skylla" mentioned below is probably an example.

[2] The curious cuirass, which has almost the appearance of being of basket work, seen on the harvesters' vase and on seal impressions from H. Triada and Zakro has been cited as showing that the corselet was known at a very early period (M. M. III, L. M. I). This particular type, however, has as yet been only found in connection with religious or ceremonial scenes and not in association with arms of offense.

a change, and the later class is occupied with religious subjects. But in the later days of the Palace of Knossos at all events, a series of clay documents attests the fact that a bronze cuirass, with shoulder-pieces and a succession of plates, was a regular part of the equipment of a Minoan knight. Sometimes he received the equivalent in the shape of a bronze ingot or talent—a good suggestion of its weight. On the somewhat later Cypro-Mycenaean ivory relief from Enkomi (where bronze greaves were also found) we see a similar cuirass.[1] This comparison has special pertinence when we remember that in the Iliad the breastplate of Agamemnon was the gift of the Cypriote Kinyras.

A close correspondence can moreover be traced between the Mycenaean and Homeric methods and incidents of combat due to the use of the tall body shield—which itself had long gone out of use at the time when the Iliad was put together. One result of this was the practice of striking at the adversary's throat as Achilles did at Hector's—an action illustrated by the gold intaglio from the third shaft grave. On the other hand the alternative endeavor of Epic heroes to pierce through the "towerlike" shield itself by a mighty spear thrust is graphically represented on the gold bezel of a Mycenaean ring found in Boeotia.[2] The risk of stumbling involved by the use of these huge body shields is exemplified in Homer by the fate of Periphêtês of Mycenae, who tripped against the rim of his shield, "reaching to his feet," and was pierced through the breast by Hector's spear as he fell backward.[3] A remarkable piece of evidence to which I shall presently call attention shows that this particular scene seems to have formed part of the repertory of the engravers of signets for Minoan lords, and that the Homeric episode may have played a part in Chansons de Geste as early as the date of the Akropolis tombs of Mycenae.[4]

Can it indeed be believed that these scenes of knightly prowess on the Mycenaean signets, belonging to the very house of Agamemnon, have no connection with the epic that glorified him in later days? Much may be allowed for variation in the details of individual episodes, but who shall deny that Schliemann's persuasion of their essen-

[1] I may refer to my remarks on this in "Mycenaean Cyprus as illustrated by the British Museum Excavations" (Journ. Anthr. Inst. vol. 30, 1900, pp. 209, seqq., and see especially p. 213). The round targe was now beginning.

[2] In the Ashmolean Museum; as yet unpublished.

[3] Il., XV, 645 seqq.

[4] I note that Prof. Gilbert Murray, who seems to regard the cuirass as a late element, still sums up his views regarding the armor and tactics of the Homeric poems as follows: "The surface speaks of the late Ionian fighting, the heart of the fighting is Mycenaean" (The Rise of the Greek Epic, p. 140). This latter point is the gist of the whole matter. But it is difficult to accept the view that the cultural phase represented by the Homeric poems in their characteristic shape is "late Ionian." The "late Ionians" no longer used bronze for their weapons. Moreover, they were well acquainted with writing and wore signet rings.

tial correspondence was not largely justified? Take the celebrated design on the signet ring from the fourth shaft grave, in which a hero, apparently in defense of a fallen warrior, strikes down his assailant, whose half-retreating comrade, covered behind by a large body shield, aims his spear apparently without effect at the victorious champion. Save that in the case of the protagonist a spear is substituted for a thrusting sword, and that the fallen figure behind the champion is that of a wounded man who still has strength to raise himself on one arm, the scene curiously recalls, even in its details, an episode of the Seventeenth Book of the Iliad. There the Telamonian Ajax, standing before Patroklos's body, strikes down Hippothoos, while Hector behind hurls his spear at Ajax, but just misses his aim.

Much might be added about these pre-Homeric illustrations of Homer, but I will confine myself here to one more example. In the temple repositories of the Palace of Knossos, dating from about 1600 B. C., was found a clay seal impression exhibiting a sea monster with a doglike head rising amidst the waves attacking a boat on which is seen a man beating it off with an oar (fig. 3).[1] But this sea monster is a prototype of Skylla, and though her dogs' heads were multiplied by Homer's time, we have here, in the epitomized manner of gem engraving, the essentials of Ulysses's adventure depicted half a millenium, at least, before the age of the Greek epic. It would appear, moreover, that the same episode was made the subject of illustration in larger works of Minoan art, accompanied, we may suppose, with further details. A fragment of a wall painting found at Mycenae shows part of a monster's head in front of a curving object, recalling the stern of the vessel on the seal impression; and Dr. Studniczka has with great probability recognized in this a pictorial version of the same design.

But, over and above such correspondence in the individual episodes and the detailed acquaintance with the material equipment of Minoan civilization, the Homeric poems themselves show a deep community with the naturalistic spirit that pervades the whole of the best Minoan art. It is a commonplace observation that the Homeric similes relating to animals recall the representations on the masterpieces of Minoan art. In both cases we have the faithful record of eyewitnesses, and when in the Iliad we are presented with a lifelike picture of a lion fastening on to the neck of a steer or roused to fury by a hunter's spear we turn for its most vivid illustration to Minoan gems.

In the transitional epoch that marks the close of the age of bronze in Greece and the Aegean lands the true art of gem engraving was nonexistent,[2] and so, too, in the Homeric poems there is no mention

[1] See my Report, B. S. A., No. IX, p. 58.

[2] Rudely scratched seal stones of early Geometric date exist, but they are of soft materials.

either of intaglios and signet rings. Yet in the Odyssey just such a scene of animal prowess as formed the theme of so many Minoan gems, a hound holding with teeth and forepaws a struggling fawn, is described as the ornament of Ulysses's golden brooch. The anachronism here involved has been met by no Homeric commentator, for we now know the fibula types of the Aegean "Chalco-sideric age" if I may coin such a word—to which the poems belong, with their inartistic bows and stilts and knobs. It is inconceivable, even did their typical forms admit of it, that any one of these could have been equipped with a naturalistic adjunct of such a kind. The suggested parallels have, in fact, been painfully sought out amongst the fashions in vogue three or four centuries later than the archeological epoch marked by the Homeric poems.[1] As if such naturalistic compositions had anything in common with the stylized mannerisms of the later Ionian art, with its sphinxes and winged monsters and mechanically balanced schemes.

Must we not rather suppose that the decorative motive here applied to Ulysses's brooch was taken over from what had been the principal personal ornaments of an earlier age, when in Greece at least fibulæ were practically unknown,[2] namely, the perforated intaglios, worn generally as periapts about the wrist. An example of one such from eastern Crete with a scene singularly recalling the motive of the brooch is seen in figure 4. It would not have required much license on the poet's part to transfer the description of such a design to a personal ornament of later usage with which he was acquainted. But the far earlier associations of the design are as patent to the eye of the archeologist as are those of a classical gem set in a medieval reliquary.

When in the days of the later epos we recognize heroic scenes already depicted by the Minoan artists and episodes instinct with the

[1] Helbig, for instance (Hom. Epos, p. 277), finds a comparison in a type of gold fibulæ, with double pins and surmounted by rows of gold sphinxes from seventh or sixth century graves of Caere and Praeneste. Ridgeway (The Early Age of Greece, I, 446) cites in the same connection "brooches in the form of dogs and horses found at Hallstatt." The best representative of the "dog" brooches of this class seem to be those from the cemetery of S. Lucia in Carniola (Marchisetti, Necropoli di S. Lucia, presso Tolmino, Tav. XV, figs. 9, 10), where in each case a small bird is seen in front of the hound. A somewhat more naturalistic example gives the key to this: the original of the dog is a catlike animal (op. cit., Tav. XX, fig. 12). We have here, in fact, a subject ultimately derived from the Nilotic scenes, in which ichneumons are seen hunting ducks. The same motive is very literally reproduced on the inlaid dagger blade from Mycenae and recurs in variant forms in Minoan art. The late Hallstatt fibulæ of this class are obviously the derivatives of classical prototypes belonging to the seventh century B. C. (In one case a winged sphinx takes the place of the cat, or pard, before the bird.) These derivatives date themselves from the sixth and even the fifth century B. C., since the last-named example was found together with a fibula of the "Certosa" class. The S. Lucia cemetery itself, according to its explorer (op. cit., p. 313), dates only from about 600 B. C. It will be seen from this how little these late Hallstatt "dog" fibulæ have to do with the design of Ulysses's brooch.

[2] The early "fiddle-bow" type is hardly found before the L. M. III period, when the art of gem engraving was already in its decline.

naturalistic spirit of that brilliant dawn of art, we may well ask how, according to any received theory, such perfect glimpses into the life of that long-past age could have been preserved. The detailed nature of many of the parallels excludes the idea that we have here to do with the fortuitous working of poets' imagination. We are continually tempted to ask, could such descriptive power in poetry go side by side with its antithesis in art, the degraded, conventional art of the period in which the Homeric epos took its final form?

But if a combination of such contradictory qualities seems in the highest degree improbable, how are we to explain this phenomenon? By what means could this undimmed reflection of a pure, great age have been perpetuated and preserved?

Only in one way, I again repeat, could such passages, presenting the incidents and life of the great days of Mycenae and instinct with the peculiar genius of its art, have been handed down intact. They were handed down intact because they were preserved in the embalming medium of an earlier epos—the product of that older non-Hellenic race to whom alike belong the glories of Mycenae and of Minoan Crete. Thus only could the iridescent wings of that earlier phantasy have maintained their pristine form and hues through days of darkness and decline to grace the later, Achaean world.

Where, indeed, would be the fly without the amber? How could the gestes and episodes of the Minoan age have survived for incorporation in later epic lays without the embalming element supplied by a more ancient poetic cycle? But the taking over and absorption of these earlier materials would be greatly simplified by the existence of such bilingual conditions as have been above postulated. The process itself may have begun very early, and the long contact of the Arcadian branch, whose language most approaches the original speech of Greek epic with the dominant Mycenaeans may have greatly contributed to its elaboration. Even in its original Minoan elements, moreover, we may expect stratification—the period, for instance, of the body shield and the period of the round targe and cuirass may have both left their mark.

The Homeric poems in the form in which they finally took shape are the result of this prolonged effort to harmonize the old and the new elements. In the nature of things this result was often incompletely attained. The evidence of patchwork is frequently patent. Contradictory features are found such as could not have coexisted at any one epoch. It has been well remarked by Prof. Gilbert Murray [1] that "even the similes, the very breath of the poetry of Homer, are in many cases—indeed, usually—adopted ready-made. Their vivid-

[1] The Rise of the Greek Epic, p. 219. Prof. Murray remarks (op. cit., p. 215): "The poets of our 'Iliad' scarcely need to have seen a lion. They have their stores of traditional similes taken from almost every moment of a lion's life."

(a) (b)

FIG. 1.—GABLED BUILDINGS ON CRETAN INTAGLIOS (1/1).

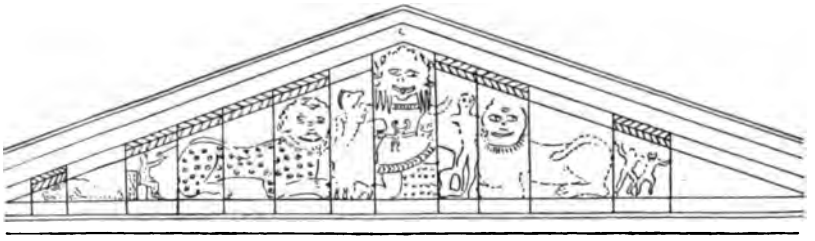


FIG. 2.—PEDIMENT OF TEMPLE AT PALAEOPOLIS, CORFÙ.

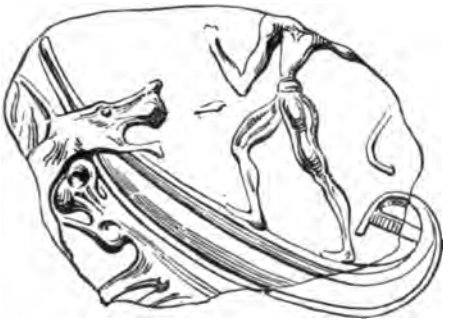


FIG. 3.—CLAY SEALING FROM TEMPLE REPOSITORIES, KNOSSOS (1/1) (B.S.A. IX. P. 50, FIG. 36).

FIG. 4.—HAEMATITE INTAGLIO FROM E. CRETE WITH DOG SEIZING STAG (1/1).

5a

5b

FIGS. 5a–5b.—GREEK SIGNET RINGS WITH SILVER HOOPS AND IVORY BEZELS FOUND IN CRETE (⅔).

ness, their directness of observation, their air of freshness and spontaneity are all deceptive." Many of them are misplaced and "were originally written to describe some quite different occasion."

Much has still to be written on the survival of Minoan elements in almost every department of the civilized life of later Greece. Apart, moreover, from oral tradition we have always to reckon with the possibility of the persistence of literary records. For we now know that an advanced system of linear script was in vogue not only in Crete but on the mainland side in the latest Mycenaean period.[1]

Besides direct tradition, however, there are traces of a process of another kind for which the early renaissance in Italy affords a striking analogy. In later classical days some of the more enduring examples of Minoan art, such as engraved gems and signets, were actually the subjects of a revival. I venture to think that it can hardly be doubted that a series of early Greek coin types are taken from the designs of Minoan intaglios. Such very naturalistic designs as the cow scratching its head with its hind leg or licking its flank or the calf that it suckles, seen on the coins of Gortyna, Karystos, and Eretria seem to be directly borrowed from Minoan lentoid gems. The two overlapping swans on coins of Eion in Macedonia recall a well-established intaglio design of the same early class. The native goats which act as supporters on either side of a fig tree on some types of the newly discovered archaic coins of Skyros suggest the same comparisons. On the other hand a version of the lions' gate scheme—two lions with their forepaws on the capital of a column, seen on an Ionian stater of about 700 B. C—has some claims, in view of the Phrygian parallels, to be regarded as an instance of direct survival.

A good deal more might be said as to this numismatic indebtedness, nor is it surprising that the civic badge on coins should have been taken at times from those on ancient gems and signets brought to light by the accidental opening of a tomb, together with bronze arms and mortal remains attributed, it may be, to some local hero. Of the almost literal reproduction of the designs on Minoan signet rings by a later Greek engraver I am able to set before you a really astonishing example. Three rings (figs. 5, 6, 7) were recently obtained by me in Athens, consisting of solid silver hoops themselves penannular with rounded terminations in which swivel fashion are set oval ivory bezels, with intaglios on either side, surrounded in each case by a high rim, itself taken over from the prominent gold rim of Egyptian scarab mountings. These bezels are perforated, the silver wire that went through them being wound around the feet of the hoops. From particularities in the technique, the state of the metal and of the ivory, and other points of internal evidence, it is

[1] Among recent discoveries are a whole series of late Minoan vases from Tiryns with inscriptions representing a mainland type of the developed linear script of Minoan Crete.

impossible to doubt the genuine antiquity of these objects.[1] They were said to have been found in a tomb in the western part of Crete, reaching Athens by way of Canea, and their owner set no high value on them.[2] This type of ring with the wire wound around the ends of the hoop is in common use for scarabs, cylinders, and scaraboids in the sixth and fifth centuries B. C., and itself goes back to Minoan or Mycenaean prototypes.[3] From the style of engraving, however, it seems impossible to date the signet rings in question earlier than about 400 B. C.

The subjects of two of these are a Sphinx with an ibex on the reverse (fig. 5*a*, *b*) and another Sphinx coupled in the same way with a Chimaera (fig. 5*a*, *b*). The intaglios are executed in an advanced provincial Greek style, in which, however, certain reminiscences of artistic schemes dating from the first half of the fifth century are still perceptible.[4]

But the designs on the two sides of the third intaglio (fig. 7*a* and *b*), though obviously engraved at the same time as the others and by the same hand belong to a very different category. On one side a man in the Minoan loin clothing with a short thrusting sword in his right hand is struggling with a lion, the head of which is seen as from above. It will be recognized at once that this scheme corresponds even in details with that of the hero struggling with a lion, engraved on a gold perforated bead or ring bezel found by Schliemann in the third shaft grave at Mycenae.[5] On the other side of the intaglio, we see a bearded warrior with a girdle and similar

[1] The exceptional character of these objects and the appearance of Mycenaean motives on one signet side by side with classical subjects on the others made it necessary, in spite of their appearance of undoubted antiquity, to submit them to the severest expertise. I had them examined by a series of the best judges of such objects, but all were unanimous both as to the antiquity of the signets and as to the fact that the ivory had not been recut and reengraved in later times. Examination of various parts of the surface under a strong microscope confirmed these results. In order, however, to make assurance doubly sure I decided on a crucial test. I intrusted to Mr. W. H. Young, the highly experienced formatore and expert in antiquities of the Ashmolean Museum, the delicate task of rebreaking two of the ivory signets along a line of earlier fracture that followed the major axis of each and of removing all extraneous materials due to previous mendings or restoration. The results of this internal analysis were altogether conclusive. The cause of the longitudinal fracture was explained in the case of the signet (fig. 7) by the swelling of the silver pin due to oxidization. The whole of the metal, transmuted to the purple oxide characteristic of decayed silver, was here within. In the case of the other signet (fig. 5) this had been replaced by a new pin in recent times, and on removing this the whole of the perforation was visible and proved to be of the ancient character. The ivory has been attacked on both ends by a tubular drill, the two holes meeting irregularly near the middle. The modern method of drilling is, of course, quite different. It is done with a chisel pointed instrument and proceeds continuously from one end.

[2] The correspondence of one of the scenes on the third ring with a type on a gold bead from Mycenae suggests, however, that its prototypes were taken from the mainland side.

[3] An amygdaloid late Minoan or Mycenaean gem representing a ship, set into a silver hoop of this type, found at Eretria, is in my own collection.

[4] As, for instance, in the attitude of the ibex (fig. *b*) and in the type of the Chimaera. The facing sphinx (fig. *a*) is carelessly engraved and presents an abnormal aspect. Of its genuine antiquity, however, there can be no doubt. (See note 1, p. 634.)

[5] Mycenae, p. 174, fig. 253.

6a

7a

6b

7b

FIGS. 6-7.—GREEK SIGNET RINGS WITH SILVER HOOPS AND IVORY BEZELS FOUND IN CRETE(⅔).

Minoan costume, wearing a helmet with zones of plates and bearing a figure-of-eight shield on his back. Owing to the defective preservation of the surface it is difficult to make out the exact character of the stroke intended or to distinguish the weapon used from the warrior's raised arms. That he is aiming a mortal blow at the figure before him is clear. The latter wears the same narrow Minoan girdle, but his helmet, which is broader, is not so well executed. He is shown in a helpless position, falling backward over the lower margin of a similar shield and holding a sword in his left hand, which, however, is rendered unavailable by his fall.

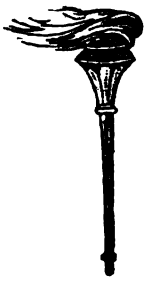
Here we have a scene closely analogous to that on a sardonyx lentoid from the third shaft grave at Mycenae,[1] except that in the present case the body shield of the falling warrior reaches to his heels. If, as seems probable, this latter detail belongs to the original of the type, and the warrior has tripped backward over the lower rim of his cumbrous body shield, the scene itself would absolutely correspond with the Homeric episode of Periphêtês, to which I have already referred.

στρεφθεὶς γὰρ μετόπισθεν ἐν ἀσπίδος ἄντυγι πάλτο,
τὴν αὐτὸς φορέεσκε ποδηνεκέ', ἕρκος ἀκόντων.
τῇ ὅ γ' ἐνὶ βλαφθεὶς πέσεν ὕπτιος, ἀμφὶ δὲ πήληξ
σμερδαλέον κονάβησε περὶ κροτάφοισι πεσόντος.[2]

We have here, in fact, the curious phenomenon of a pre-Homeric illustration of Homer revived by a classical engraver.

[1] Furtwängler, Antike Gemmen, Pl. II, 2, and cf. Reichel, Homerische Waffen, p. 7, fig. 6. A strange and indescribably misleading representation of this gem is given in Schliemann, Mycenae, p. 202, fig. 313.

[2] Il., XV, 645 seqq.



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NEW ARCHEOLOGICAL LIGHTS ON THE ORIGINS OF CIVILIZATION IN EUROPE

BY

SIR ARTHUR EVANS, D. LITT., LL. D., P. S. A., F. R. S.

FROM THE SMITHSONIAN REPORT FOR 1916, PAGES 425–445

(PUBLICATION 2467)

WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

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Les cartes de la Mésopotamie
d'Ulysse, S.J.

P. Desvat : Diverses cartes et tables
[illegible] les géographes anciens, [illegible] les chronologies
[illegible] les chinois et [illegible] modernes - Alan 1664

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When I was asked on behalf of the council of the British Association to occupy the responsible post of president at the meeting in this great city—the fourth that has taken place here—I was certainly taken by surprise; the more so as my own subject of research seemed somewhat removed from what may be described as the central interests of your body. The turn of archeology, however, I was told, had come round again on the rota of the sciences represented; nor could I be indifferent to the fact that the last presidential address on this theme had been delivered by my father at the Toronto meeting of 1897.

Still, it was not till after considerable hesitation that I accepted the honor. Engaged as I have been through a series of years in the work of excavation in Crete—a work which involved not only the quarrying but the building up of wholly new materials and has entailed the endeavor to classify the successive phases of a long, continuous story—absorbed and fascinated by my own investigation, I am oppressed with the consciousness of having been less able to keep pace with the progress of fellow explorers in other departments or to do sufficient justice to their results. * * * The science of antiquity in its purest form depends, indeed, on evidence and rests on principles indistinguishable from those of the sister science of geology. Its methods are stratigraphic. As in that case the successive deposits and the characteristic contents—often of the most fragmentary kind—enable the geologist to reconstruct the fauna and flora, and climate and physical conditions of the past ages of the world, and to follow out their gradual transitions or dislocations, so it is with the archeologist in dealing with unwritten history.

In recent years—not to speak of the revelations of late quaternary culture on which I shall presently have occasion to dwell—in Egypt, in Babylonia, in ancient Persia, in the central Asian deserts, or, coming nearer home, in the Ægean lands, the patient exploration

[1]Address of the president of the British Association for the Advancement of Science, Newcastle-on-Tyne, 1916. Reprinted by permission from author's pamphlet edition.

of early sites, in many cases of huge stratified mounds, the unearthing of buried buildings, the opening of tombs, and the research of minor relics, has reconstituted the successive stages of whole fabrics of former civilization, the very existence of which was formerly unsuspected. Even in later periods archeology, as a dispassionate witness, has been continually checking, supplementing, and illustrating written history. It has called back to our upper air, as with a magician's wand, shapes and conditions that seemed to have been irrevocably lost in the night of time.

Thus evoked, moreover, the past is often seen to hold a mirror to the future, correcting wrong impressions—the result of some temporary revolution in the whirligig of time—by the more permanent standard of abiding conditions, and affording in the solid evidence of past well-being the "substance of things hoped for." Nowhere, indeed, has this been more in evidence than in that vexed region between the Danube and the Adriatic, to-day the home of the Serbian race, to the antiquarian exploration of which many of the earlier years of my own life were devoted.

What visions, indeed, do those investigations not recall! Imperial cities, once the seats of wide administration and of prolific mints, sunk to neglected villages, vestiges of great engineering works, bridges, aqueducts, or here a main line of ancient highway hardly traceable even as a track across the wilderness! Or, again, the signs of medieval revival above the Roman ruins—remains of once populous mining centers scattered along the lone hillside, the shells of stately churches with the effigies, bullet-scarred now, of royal founders, once champions of Christendom against the Paynim—nay, the actual relics of great rulers, lawgivers, national heroes, still secreted in half-ruined monastic retreats! Sunt lacrimæ rerum et mentem mortalia tangunt. Even the archeologist incurs more human debts, and the evocation of the past carries with it living responsibilities. * * *

Whole provinces of ancient history would lie beyond our ken—often through the mere loss of the works of classical authors—were it not for the results of archeological research. At other times again it has redressed the balance where certain aspects of the ancient world have been brought into unequal prominence, it may be, by mere accidents of literary style. Even if we take the Greek world, generally so rich in its literary sources, how comparatively little should we know of its brilliant civilization as illustrated by the great civic foundations of Magna Graecia and Sicily if we had to depend on its written sources alone. But the noble monuments of those regions, the results of excavation, the magnificent coinage—a sum of evidence illustrative in turn of public and private life, of art and

religion, of politics and of economic conditions—have gone far to supply the lacuna.

Look, too, at the history of the Roman Empire—how defective and misleading in many departments are the literary records. It has been by methodical researches into evidence such as the above, notably in the epigraphic field, that the most trustworthy results have been worked out.

Take the case of Roman Britain. Had the lost books of Ammianus relating to Britain been preserved we might have had, in his rugged style, some partial sketch of the Province as it existed in the age of its most complete Romanization. As it is, so far as historians are concerned, we are left in almost complete darkness. Here, again, it is through archeological research that light has penetrated, and thanks to the thoroughness and persistence of our own investigators, town sites such as Silchester in Roman Britain have been more completely uncovered than those of any other Province.[1] Nor has any part of Britain supplied more important contributions in this field than the region of the Roman wall, that great limitary work between the Solway and the mouth of the Tyne that once marked the northernmost European barrier of civilized dominion.

Speaking here, on the site of Hadrian's bridge-head station that formed its eastern key, it would be impossible for me not to pay a passing tribute, however inadequate, to the continuous work of exploration and research carried out by the Society of Antiquaries of Newcastle, now for over a hundred years in existence, worthily seconded by its sister society on the Cumbrian side, and of which the volumes of the respective Proceedings and Transactions, Archæologia, Æliana, and last but not least the Lapidarium Septentrionale, are abiding records. The basis of methodical study was here the survey of the wall carried out, together with that of its main military approach, the Watling Street, by MacLauchlan, under the auspices of Algernon, fourth Duke of Northumberland. And who, however lightly touching on such a theme, can overlook the services of the late Dr. Collingwood Bruce, the "Grand old man," not only of the wall itself, but of all pertaining to border antiquities, distinguished as an investigator for his scholarship and learning, whose lifelong devotion to his subject and contagious enthusiasm made the Roman wall, as it had never been before, a household word?

New points of view have arisen, a stricter method and a greater subdivision of labor have become imperative in this as in other departments of research. We must, therefore, rejoice that local explorers have more and more availed themselves of the cooperation, and welcomed the guidance of those equipped with comparative knowl-

[1] See Haverfield, "Roman Britain in 1913," p. 86.

edge drawn from other spheres. The British Vallum, it is now realized, must be looked at with perpetual reference to other frontier lines, such as the Germanic or the Rhætian lines; local remains of every kind have to be correlated with similar discoveries throughout the length and breadth of the Roman Empire.

This attitude in the investigation of the remains of Roman Britain—the promotion of which owes so much to the energy and experience of Prof. Haverfield—has in recent years conducted excavation to specially valuable results. The work at Corbridge, the ancient Corstopitum, begun in 1906, and continued down to the autumn of 1914, has already uncovered throughout a great part of its area the largest urban center—civil as well as military in character—on the line of the wall, and the principal store base of its stations. Here, together with well-built granaries, workshops, and barracks, and such records of civic life as are supplied by sculptured stones and inscriptions, and the double discovery of hoards of gold coins, has come to light a spacious and massively constructed stone building, apparently a military storehouse, worthy to rank beside the bridge piers of the North Tyne, among the most imposing monuments of Roman Britain. There is much here, indeed, to carry our thoughts far beyond our insular limits. On this, as on so many other sites along the wall, the inscriptions and reliefs take us very far afield. We mark the gravestone of a man of Palmyra, an altar of the Tyrian Hercules—its Phoenician Baal—a dedication to a pantheistic goddess of Syrian religion and the rayed effigy of the Persian Mithra. So, too, in the neighborhood of Newcastle itself, as elsewhere on the wall, there was found an altar of Jupiter Dolichenus, the old Anatolian God of the Double Axe, the male form of the divinity once worshipped in the prehistoric Labyrinth of Crete. Nowhere are we more struck than in this remote extremity of the Empire with the heterogeneous religious elements, often drawn from its far eastern borders, that before the days of the final advent of Christianity, Roman dominion had been instrumental in diffusing. The Orontes may be said to have flowed into the Tyne as well as the Tiber.

I have no pretension to follow up the various affluents merged in the later course of Greco-Roman civilization, as illustrated by these and similar discoveries throughout the Roman world. My own recent researches have been particularly concerned with the much more ancient cultural stage—that of prehistoric Crete—which leads up to the Greco-Roman, and which might seem to present the problem of origins at any rate in a less complex shape. The marvelous Minoan civilization that has there come to light shows that Crete of 4,000 years ago must unquestionably be regarded as the birthplace of our European civilization in its higher form.

But are we, even then, appreciably nearer to the fountain head?

A new and far more remote vista has opened out in recent years, and it is not too much to say that a wholly new standpoint has been gained from which to survey the early history of the human race. The investigations of a brilliant band of prehistoric archeologists, with the aid of representatives of the sister sciences of geology and paleontology, have brought together such a mass of striking materials as to place the evolution of human art and appliances in the last Quaternary period on a far higher level than had even been suspected previously. Following in the footsteps of Lartet and after him Rivière and Piette, Profs. Cartailhac, Capitan, and Boule, the Abbé Breuil, Dr. Obermeier and their fellow investigators have revolutionized our knowledge of a phase of human culture which goes so far back beyond the limits of any continuous story that it may well be said to belong to an older world.

To the engraved and sculptured works of man in the "Reindeer period" we have now to add not only such new specialties as are exemplified by the molded clay figures of life-size bisons in the Tuc d'Audoubert Cave, or the similar high reliefs of a procession of six horses cut on the overhanging limestone brow of Cap Blanc, but whole galleries of painted designs on the walls of caverns and rock shelters.

So astonishing was this last discovery, made first by the Spanish investigator Señor de Sautuola—or rather his little daughter—as long ago as 1878, that it was not till after it had been corroborated by repeated finds on the French side of the Pyrenees—not, indeed, till the beginning of the present century—that the Paleolithic age of these rock paintings was generally recognized. In their most developed stage, as illustrated by the bulk of the figures in the Cave of Altamira itself, and in those of Marsoulas in the Haute Garonne, and of Font de Gaume in the Dordogne, these primeval frescoes display not only a consummate mastery of natural design, but an extraordinary technical resource. Apart from the charcoal used in certain outlines, the chief coloring matter was red and yellow ochre, mortars and palettes for the preparation of which have come to light. In single animals the tints are varied from black to dark and ruddy brown or brilliant orange, and so, by fine gradations, to paler nuances, obtained by scraping and washing. Outlines and details are brought out by white incised lines, and the artists availed themselves with great skill of the reliefs afforded by convexities of the rock surface. But the greatest marvel of all is that such polychrome masterpieces as the bisons, standing and couchant, or with limbs huddled together, of the Altamira Cave, were executed on the ceilings of inner vaults and galleries where the light of day has never penetrated. Nowhere

is there any trace of smoke, and it is clear that great progress in the art of artificial illumination had already been made. We now know that stone lamps, decorated in one case with the engraved head of an ibex, were already in existence.

Such was the level of artistic attainment in southwestern Europe, at a modest estimate some 10,000 years earlier than the most ancient monuments of Egypt or Chaldæa! Nor is this an isolated phenomenon. One by one, characteristics, both spiritual and material, that had been formerly thought to be the special marks of later ages of mankind have been shown to go back to that earlier world. I myself can never forget the impression produced on me as a privileged spectator of a freshly uncovered interment in one of the Balzi Rossi Caves—an impression subsequently confirmed by other experiences of similar discoveries in these caves, which together first supplied the concordant testimony of an elaborate cult of the dead on the part of Aurignacian man. Tall skeletons of the highly developed Cro-Magnon type lay beside or above their hearths, and protected by great stones from roving beasts. Flint knives and bone javelins had been placed within reach of their hands, chaplets and necklaces of sea shells, fish vertebræ, and studs of carved bone had decked their persons. With these had been set lumps of iron peroxide, the red stains of which appeared on skulls and bones, so that they might make a fitting show in the underworld.

> Colors, too, to paint his body,
> Place within his hand,
> That he glisten, bright and ruddy,
> In the Spirit-Land![1]

Nor is it only in this cult of the departed that we trace the dawn of religious practices in that older world. At Cogul we may now survey the ritual dance of nine skirted women round a male satyrlike figure of short stature, while at Alpera a gowned sister ministrant holds up what has all the appearance of being a small idol. It can hardly be doubted that the small female images of ivory, steatite, and crystalline talc from the same Aurignacian stratum as that of the Balzi Rossi interments, in which great prominence is given to the organs of maternity, had some fetichistic intention. So, too, many of the figures of animals engraved and painted on the inmost vaults of the caves may well have been due, as M. Salomon Reinach has suggested, to the magical ideas prompted by the desire to obtain a hold on the quarries of the chase that supplied the means of livelihood.

In a similar religious connection may be taken the growth of a whole family of signs, in some cases obviously derivatives of fuller pictorial originals, but not infrequently simplified to such a degree

[1] Schiller "Nadowessier's Todtenlied."

that they resemble or actually reproduce letters of the alphabet. Often they occur in groups like regular inscriptions, and it is not surprising that in some quarters they should have been regarded as evidence that the art of writing had already been evolved by the men of the Reindeer age. A symbolic value certainly is to be attributed to these signs, and it must at least be admitted that by the close of the late Quaternary age considerable advance had been made in hieroglyphic expression.

The evidences of more or less continuous civilized development reaching its apogee about the close of the Magdalenian period have been constantly emerging from recent discoveries. The recurring "tectiform" sign had already clearly pointed to the existence of huts or wigwams; the "scutiform" and other types record appliances yet to be elucidated, and another sign well illustrated on a bone pendant from the Cave of St. Marcel has an unmistakable resemblance to a sledge.[1] But the most astonishing revelation of the cultural level already reached by primeval man has been supplied by the more recently discovered rock paintings of Spain. The area of discovery has now been extended there from the Province of Santander, where Altamira itself is situated, to the Valley of the Ebro, the Central Sierras, and to the extreme southeastern region, including the Provinces of Albacete, Murcia, and Almeria, and even to within the borders of Granada.

One after another, features that had been reckoned as the exclusive property of Neolithic or later ages are thus seen to have been shared by Paleolithic man in the final stage of his evolution. For the first time, moreover, we find the productions of his art rich in human subjects. At Cogul the sacral dance is performed by women clad from the waist downward in well-cut gowns, while in a rock shelter of Alpera,[2] where we meet with the same skirted ladies, their dress is supplemented by flying sashes. On the rock painting of the Cueva de la Vieja, near the same place, women are seen with still longer gowns rising to their bosoms. We are already a long way from Eve.

It is this great Alpera fresco which, among all those discovered, has afforded most new elements. Here are depicted whole scenes of the chase in which bowmen—up to the time of these last discoveries unknown among Paleolithic representations—take a leading part, though they had not as yet the use of quivers. Some are dancing in the attitude of the Australian corroborees. Several wear plumed headdresses, and the attitudes at times are extraordinarily animated. What is specially remarkable is that some of the groups of these

[1] This interpretation suggested by me after inspecting the object in 1902 has been approved by the Abbé Breuil (Anthropologie, XIII, p. 152) and by Professor Sollas, "Ancient Hunters," [2] 1915, p. 480.

[2] That of Carasoles del Bosque: Breuil, Anthropologie, XXVI, 1915, p. 329, et seq.

Spanish rock paintings show dogs or jackals accompanying the hunters, so that the process of domesticating animals had already begun. Hafted axes are depicted as well as cunningly shaped throwing sticks. In one case at least we see two opposed bands of archers—marking at any rate a stage in social development in which organized warfare was possible.

Nor can there be any question as to the age of these scenes and figures, by themselves so suggestive of a much later phase of human history. They are inseparable from other elements of the same group, the animal and symbolic representations of which are shared by the contemporary school of rock painting north of the Pyrenees. Some are overlaid by palimpsests, themselves of Paleolithic character. Among the animals actually depicted, moreover, the elk and bison distinctly belong to the late Quaternary fauna of both regions, and are unknown there to the Neolithic deposits.

In its broader aspects this field of human culture, to which, on the European side, the name of Reindeer age may still, on the whole, be applied, is now seen to have been very widespread. In Europe itself it permeates a large area—defined by the boundaries of glaciation—from Poland, and even a large Russian tract, to Bohemia, the upper course of the Danube and of the Rhine, to southwestern Britain and southeastern Spain. Beyond the Mediterranean, moreover, it fits on under varying conditions to a parallel form of culture, the remains of which are by no means confined to the Cis-Saharan zone, where incised figures occur of animals like the long-horned buffalo (*Bulbalus antiquus*) and others long extinct in that region. This southern branch may eventually be found to have a large extension. The nearest parallels to the finer class of rock carvings as seen in the Dordogne are, in fact, to be found among the more ancient specimens of similar work in South Africa, while the rock paintings of Spain find their best analogies among the Bushmen.

Glancing at this late Quaternary culture, as a whole, in view of the materials supplied on the European side, it will not be superfluous for me to call attention to two important points which some observers have shown a tendency to pass over.

Its successive phases, the Aurignacian, the Solutrean, and the Magdalenian, with its decadent Azilian offshoot—the order of which may now be regarded as stratigraphically established—represent, on the whole, a continuous story.

I will not here discuss the question as to how far the disappearance of Neanderthal man and the close of the Mousterian epoch represents a "fault" or gap. But the view that there was any real break in the course of the cultural history of the Reindeer age itself does not seem to have sufficient warrant.

It is true that new elements came in from more than one direction. On the old Aurignacian area, which had a trans-Mediterranean extension from Syria to Morocco, there intruded on the European side—apparently from the east—the Solutrean type of culture, with its perfected flint-working and exquisite laurel-leaf points. Magdalenian man, on the other hand, great as the proficiency that he attained in the carving of horn and bone, was much behind in his flint-knapping. That there were dislocations and temporary setbacks is evident. But on every side we still note transitions and reminiscences. When, moreover, we turn to the most striking features of this whole cultural phase, the primeval arts of sculpture, engraving, and painting, we see a gradual upgrowth and unbroken tradition. From mere outline figures and simple two-legged profiles of animals we are led on step by step to the full freedom of the Magdalenian artists. From isolated or disconnected subjects we watch the advance to large compositions, such as the hunting scenes of the Spanish rock paintings. In the culminating phase of this art we even find impressionist works. A brilliant illustration of such is seen in the galloping herds of horses, lightly sketched by the engraver on the stone slab from the Chaumont Grotto, depicting the leader in each case in front of his troop, and its serried line—straight as that of a well-drilled battalion—in perspective rendering. The whole must be taken to be a faithful memory sketch of an exciting episode of prairie life.

The other characteristic feature of the culture of the Reindeer age that seems to deserve special emphasis, and is almost the corollary of the foregoing, is that it can not be regarded as the property of a single race. It is true that the finely built Cro-Magnon race seems to have predominated, and must be regarded as an element of continuity throughout, but the evidences of the coexistence of other human types is clear. Of the physical characteristics of these it is not my province to speak. Here it will be sufficient to point out that their interments, as well as their general associations, conclusively show that they shared, even in its details, the common culture of the age, followed the same fashions, plied the same arts, and were imbued with the same beliefs as the Cro-Magnon folk. The negroid skeletons intercalated in the interesting succession of hearths and interments of the Grotte des Enfants at Grimaldi had been buried with the same rites, decked with the same shell ornaments, and were supplied with the same red coloring matter for use in the spirit world, as we find in the other sepultures of these caves belonging to the Cro-Magnon race. Similar burial rites were associated in this country with the "Red Lady of Paviland," the contemporary Aurignacian date of which is now well established. A like identity of

funeral custom recurred again in the sepulture of a man of the "Brünn" race on the eastern boundary of this field of culture.

In other words, the conditions prevailing were analogous to those of modern Europe. Cultural features of the same general character had imposed themselves on a heterogeneous population. That there was a considerable amount of circulation, indeed—if not of primitive commerce—among the peoples of the Reindeer age is shown by the diffusion of shell or fossil ornaments derived from the Atlantic, the Mediterranean, or from inland geological strata. Art itself is less the property of one or another race than has sometimes been imagined—indeed, if we compare those products of the modern carver's art that have most analogy with the horn and bone carvings of the cave men and rise at times to great excellence—as we see them, for instance, in Switzerland or Norway—they are often the work of races of very different physical types. The negroid contributions, at least in the southern zone of this late Quaternary field, must not be underestimated. The early steatopygous images—such as some of these of the Balzi Rossi caves—may safely be regarded as due to this ethnic type, which is also pictorially represented in some of the Spanish rock paintings.

The nascent flame of primeval culture was thus already kindled in that older world, and, so far as our present knowledge goes, it was in the southwestern part of our continent, on either side of the Pyrenees, that it shone its brightest. After the great strides in human progress already made at that remote epoch, it is hard, indeed, to understand what it was that still delayed the rise of European civilization in its higher shape. Yet it had to wait for its fulfillment through many millennia. The gathering shadows thickened and the darkness of a long night fell not on that favored region alone, but throughout the wide area where Reindeer man had ranged. Still the question rises—as yet imperfectly answered—were there no relay runners to pass on elsewhere the lighted torch?

Something, indeed, has been recently done toward bridging over the "hiatus" that formerly separated the Neolithic from the Paleolithic age—the yawning gulf between two worlds of human existence. The Azilian—a later decadent outgrowth of the preceding culture—which is now seen partially to fill the lacuna, seems to be in some respects an impoverished survival of the Aurignacian.[1] The existence of this phase was first established by the long and patient investigations of Piette in the stratified deposits of the cave of Mas d'Azil in the Ariège, from which it derives its name, and it has been proved by recent discoveries to have had a wide extension. It affords evidence of a milder and moister climate—well illustrated by

[1] Breuil, "Congr. Préhist.," Geneva, 1912, p. 216.

the abundance of the little wood snail (*Helix nemoralis*) and the increasing tendency of the reindeer to die out in the southern parts of the area, so that in the fabric of the characteristic harpoons deer-horns are used as substitutes. Artistic designs now fail us, but the polychrome technique of the preceding age still survives in certain schematic and geometric figures, and in curious colored signs on pebbles. These last first came to light in the cave of Mas d'Azil, but they have now been found to recur much further afield in a similar association in grottoes from the neighborhood of Basel to that of Salamanca. So like letters are some of these signs that the lively imagination of Piette saw in them the actual characters of a primeval alphabet.

The little flakes with a worked edge, often known as "pygmy flints," which were, most of them, designed for insertion into bone or horn harpoons, like some Neolithic examples, are very characteristic of this stratum, which is widely diffused in France and elsewhere under the misleading name of "Tardenoisian." At Ofnet, in Bavaria, it is associated with a ceremonial skull burial showing the coexistence at that spot of brachycephalic and dolichocephalic types, both of a new character. In Britain, as we know, this Azilian, or a closely allied phase, is traceable as far north as the Oban Caves.

What, however, is of special interest is the existence of a northern parallel to this cultural phase, first ascertained by the Danish investigator, Dr. Sarauw, in the lake station of Maglemose, near the west coast of Zealand. Here bone harpoons of the Azilian type occur, with bone and horn implements showing geometrical and rude animal engravings of a character divergent from the Magdalenian tradition. The settlement took place when what is now the Baltic was still the great "Ancylus Lake," and the waters of the North Sea had not yet burst into it. It belongs to the period of the Danish pine and birch woods and is shown to be anterior to the earliest shell mounds of the Kitchenmidden people, when the pine and the birch had given place to the oak. Similar deposits extend to Sweden and Norway and to the Baltic Provinces as far as the Gulf of Finland. The parallel relationship of this culture is clear, and its remains are often accompanied with the characteristic "pygmy" flints. Breuil, however,[1] while admitting the late Paleolithic character of this northern branch, would bring it into relation with a vast Siberian and Altaic province, distinguished by the widespread existence of rock carvings of animals. It is interesting to note that a rock engraving of a reindeer, very well stylized, from the Trondhjem Fjord, which has been referred to the Maglemosian phase, preserves the simple profile rendering—two legs only being visible—of early Aurignacian tradition.

[1] "Les subdivisions du paléolithique supérieur et leur signification." Congrès intern. d'Anthrop. et d'Archéol. préhist., XIVme Sess., Genève, 1912, pp. 165, 238.

It is worth noting that an art affiliated to that of the petroglyphs of the old Altaic region long survived in the figures of the Lapp troll-drums and still occasionally lingers, as I have myself had occasion to observe, on the reindeer-horn spoons of the Finnish and Russian Lapps, whose ethnic relationship, moreover, points east of the Urals. The existence of a late Paleolithic province on the Russian side is in any case now well recognized and itself supports the idea of a later shifting north and northeast, just as at a former period it had oscillated in a southwestern direction. All this must be regarded as corroborating the view long ago expressed by Boyd Dawkins[1] that some part of the old cave race may still be represented by the modern Eskimos. Testut's comparison of the short-statured Magdalenian skeleton from the rock shelter of Chancelade in the Dordogne with that of an Eskimo certainly confirms this conclusion.

On the other hand, the evidence, already referred to, of an extension of the late Paleolithic culture to a North African zone, including rock sculptures depicting a series of animals extinct there in the later age, may be taken to favor the idea of a partial continuation on that side. Some of the early rock sculptures in the south of the continent, such as the figure of a walking elephant reproduced by Dr. Peringuey, afford the clearest existing parallels to the best Magdalenian examples. There is much, indeed, to be said for the view of which Sollas is an exponent that the bushmen, who at a more recent date entered that region from the north, and whose rock painting attained such a high level of naturalistic art, may themselves be taken as later representatives of the same tradition. In their human figures the resemblances descend even to conventional details, such as we meet with at Cogul and Alpera.

Once more, we must never lose sight of the fact that from the early Aurignacian period onward a negroid element in the broadest sense of the word shared in this artistic culture as seen on both sides of the Pyrenees.

At least we now know that cave man did not suffer any sudden extinction, though on the European side, partly, perhaps, owing to the new climatic conditions, this culture underwent a marked degeneration. It may well be that, as the osteological evidence seems to imply, some outgrowth of the old Cro-Magnon type actually perpetuated itself in the Dordogne. We have certainly lengthened our knowledge of the Paleolithic. But in the present state of the evidence it seems better to subscribe to Cartailhac's view that its junction with the Neolithic has not yet been reached. There does not seem to be any real continuity between the culture revealed at Maglemose and that

[1] "Early Man in Britain," 1880, p. 233 et seq.

of the immediately superposed early Neolithic stratum of the shell mounds, which, moreover, as has been already said, evidence a change both in climatic and geological conditions, implying a considerable interval of time.

It is a commonplace of archeology that the culture of the Neolithic peoples throughout a large part of central, northern, and western Europe—like the newly domesticated species possessed by them—is Eurasiatic in type. So, too, in southern Greece and the Ægean world we meet with a form of Neolithic culture which must be essentially regarded as a prolongation of that of Asia Minor.

It is clear that it is on this Neolithic foundation that our later civilization immediately stands. But in the constant chain of actions and reactions by which the history of mankind is bound together—short of the extinction of all concerned, an hypothesis in this case excluded—it is equally certain that no great human achievement is without its continuous effect. The more we realize the substantial amount of progress of the men of the late Quaternary age in arts and crafts and ideas, the more difficult it is to avoid the conclusion that somewhere "at the back of behind"—it may be by more than one route and on more than one continent, in Asia as well as Africa—actual links of connection may eventually come to light.

Of the origins of our complex European culture this much at least can be confidently stated: The earliest extraneous sources on which it drew lay respectively in two directions—in the Valley of the Nile, on one side, and in that of the Euphrates, on the other.

Of the high early culture in the lower Euphrates Valley our first real knowledge has been due to the excavations of De Sarzec in the mounds of Tello, the ancient Lagash. It is now seen that the civilization that we call Babylonian, and which was hitherto known under its Semitic guise, was really in its main features an inheritance from the earlier Sumerian race—culture in this case once more dominating nationality. Even the laws which Hammurabi traditionally received from the Babylonian sun god were largely modeled on the reforms enacted a thousand years earlier by his predecessor, Urukagina, and ascribed by him to the inspiration of the city god of Lagash.[1] It is hardly necessary to insist on the later indebtedness of our civilization to this culture in its Semitized shape, as passed on, together with other more purely Semitic elements, to the Mediterranean world through Syria, Canaan, and Phœnicia, or by way of Assyria, and by means of the increasing hold gained on the old Hittite region of Anatolia.

Even beyond the ancient Mesopotamian region which was the focus of these influences, the researches of De Morgan, Gautier, and Lampre, of the French "Délégation en Perse," have opened up

[1] See L. W. King, "History of Sumner and Akkad," p. 184.

another independent field, revealing a nascent civilization equally ancient, of which Elam—the later Susiana—was the center. Still further afield, moreover—some 300 miles east of the Caspian the interesting investigations of the Pumpelly expedition in the mounds of Anau, near Ashkabad in southern Turkestan, have brought to light a parallel and related culture. The painted Neolithic sherds of Anau, with their geometrical decoration, similar to contemporary ware of Elam, have suggested wide comparisons with the painted pottery of somewhat later date found in Cappadocia and other parts of Anatolia, as well as in the north Syrian regions. It has, moreover, been reasonably asked whether another class of painted Neolithic fabrics, the traces of which extend across the steppes of southern Russia, and, by way of that ancient zone of migration, to the lower Danube and northern Greece, may not stand in some original relation to the same ancient province. The new discoveries, however, in the mounds of Elam and Anau have at most a bearing on the primitive phase of culture in parts of southeastern Europe that preceded the age when metal was generally in use.

Turning to the Nile Valley, we are again confronted with an extraordinary revolution in the whole point of view effected during recent years. Thanks mainly to the methodical researches initiated by Flinders Petrie, we are able to look back beyond the dynasties to the very beginnings of Egyptian civilization. Already by the closing phase of the Neolithic and by the days of the first incipient use of metals the indigenous population had attained an extraordinarily high level. If, on the one hand, it displays Libyan connections, on the other we already note the evidences of commercial intercourse with the Red Sea; and the constant appearance of large rowing vessels in the figured designs shows that the Nile itself was extensively used for navigation. Flint working was carried to unrivaled perfection, and special artistic refinement was displayed in the manufacture of vessels of variegated breccia and other stones. The antecedent stages of many Egyptian hieroglyphs are already traceable, and the cult of Egyptian divinities, like Min, was already practiced. Whatever ethnic change may have marked the establishment of Pharaonic rule, here, too, the salient features of the old indigenous culture were taken over by the new régime. This early dynastic period itself has also received entirely new illustration from the same researches, and the freshness and force of its artistic works in many respects outshine anything produced in the later course of Egyptian history.

The continuity of human tradition, as a whole, in areas geographically connected, like Eurafrica on the one side and Eurasia on the other, has been here postulated. Since, as we have seen, the Late Paleolithic culture was not violently extinguished but shows signs of survival, both north and south, we are entitled to trace elements of direct

derivation from this source among the inherited acquirements that finally led up to the higher forms of ancient civilization that arose on the Nile and the Euphrates. In many directions, we may believe, the flaming torch had been carried on by the relay runners.

But what, it may be asked, of Greece itself, where human culture reached its highest pinnacle in the ancient world and to which we look as the principal source of our own civilization?

Till within recent years it seemed almost a point of honor for classical scholars to regard Hellenic civilization as a wonder child, sprung, like Athena herself, fully panoplied from the head of Zeus. The indebtedness to oriental sources was either regarded as comparatively late or confined to such definite borrowings as the alphabet or certain weights and measures. Egypt, on the other hand, at least till Alexandrine times, was looked on as something apart, and it must be said that Egyptologists, on their side, were only too anxious to preserve their sanctum from profane contact.

A truer perspective has now been opened out. It has been made abundantly clear that the rise of Hellenic civilization was itself part of a wider economy and can be no longer regarded as an isolated phenomenon. Indirectly, its relation to the greater world and to the ancient centers to the south and east has been now established by its affiliation to the civilization of prehistoric Crete and by the revelation of the extraordinarily high degree of proficiency that was there attained in almost all departments of human art and industry. That Crete itself—the "Mid-Sea Land," a kind of halfway house between three continents—should have been the cradle of our European civilization was, in fact, a logical consequence of its geographical position. An outlier of mainland Greece, almost opposite the mouths of the Nile, primitive intercourse between Crete and the farther shores of the Libyan Sea was still further facilitated by favorable winds and currents. In the eastern direction, on the other hand, island stepping-stones brought it into easy communication with the coast of Asia Minor, with which it was actually connected in late geological times.

But the extraneous influences that were here operative from a remote period encountered on the island itself a primitive indigenous culture that had grown up there from immemorial time. In view of some recent geological calculations, such as those of Baron de Geer, who by counting the numbers of layers of mud in Lake Ragunda has reduced the ice-free period in Sweden to 7,000 years, it will not be superfluous to emphasize the extreme antiquity that seems to be indicated for even the later Neolithic in Crete. The Hill of Knossos, upon which the remains of the brilliant Minoan civilization have found their most striking revelation, itself resembles in a large part of its composition a great mound or tell—like those of Mesopotamia or Egypt—formed of layer after layer

of human deposits. But the remains of the whole of the later ages represented down to the earliest Minoan period (which itself goes back to a time contemporary with the early dynasties of Egypt—at a moderate estimate to B. C. 3400) occupy considerably less than a half—19 feet, that is, out of a total of over 45. Such calculations can have only a relative value, but, even if we assume a more rapid accumulation of débris for the Neolithic strata and deduct a third from our calculation, they would still occupy a space of over 3,400 years, giving a total antiquity of some 9,000 years from the present time.[1] No Neolithic section in Europe can compare in extent with that of Knossos, which itself can be divided by the character of its contents into an early, middle, and late phase. But its earliest stratum already shows the culture in an advanced stage, with carefully ground and polished axes and finely burnished pottery. The beginnings of Cretan Neolithic must go back to a still more remote antiquity.

The continuous history of the Neolithic age is carried back at Knossos to an earlier epoch than is represented in the deposits of its geographically related areas on the Greek and Anatolian side. But sufficient materials for comparison exist to show that the Cretan branch belongs to a vast province of primitive culture that extended from southern Greece and the Ægean Islands throughout a wide region of Asia Minor and probably still further afield.

An interesting characteristic is the appearance in the Knossian deposits of clay images of squatting female figures of a pronouncedly steatopygous conformation and with hands on the breasts. These in turn fit on to a large family of similar images which recur throughout the above era, though elsewhere they are generally known in their somewhat developed stage, showing a tendency to be translated into stone, and, finally—perhaps under extraneous influences both from the north and east—taking a more extended attitude. These clearly stand in a parallel relationship to a whole family of figures with the organs of maternity strongly developed that characterize the Semitic lands and which seem to have spread from there to Sumeria and to the seats of the Anau culture.

At the same time this steatopygous family, which in other parts of the Mediterranean Basin ranges from prehistoric Egypt and Malta to the north of mainland Greece, calls up suggestive reminiscences of the similar images of Aurignacian man. It is especially interesting to note that in Crete, as in the Anatolian region where these primitive images occur, the worship of a mother goddess predominated in later times, generally associated with a divine child—a worship which

[1] For a fuller statement I must refer to my forthcoming work, "The Nine Minoan Periods" (Macmillans), Vol. I: Neolithic section.

later survived in a classical guise and influenced all later religion. Another interesting evidence of the underlying religious community between Crete and Asia Minor is the diffusion in both areas of the cult of the Double Axe. This divine symbol, indeed, or "Labrys," became the special emblem of the palace sanctuary of Knossos itself, which owes to it its traditional name of Labyrinth. I have already called attention to the fact that the absorptive and disseminating power of the Roman Empire brought the cult of a male form of the divinity of the Double Axe to the Roman wall and to the actual site on which Newcastle stands.

The fact should never be left out of sight that the gifted indigenous stock which in Crete eventually took to itself, on one hand and the other, so many elements of exotic culture, was still deep-rooted in its own. It had, moreover, the advantages of an insular people in taking what it wanted and no more. Thus, it was stimulated by foreign influences but never dominated by them, and there is nothing here of the servility of Phœnician art. Much as it assimilated, it never lost its independent tradition.

It is interesting to note that the first quickening impulse came to Crete from the Egyptian and not from the oriental side—the eastern factor, indeed, is of comparatively late appearance. My own researches have led me to the definite conclusion that cultural influences were already reaching Crete from beyond the Libyan Sea before the beginning of the Egyptian dynasties. These primitive influences are attested, amongst other evidences, by the forms of stone vessels, by the same esthetic tradition in the selection of materials distinguished by their polychromy, by the appearance of certain symbolic signs, and the subjects and shapes of seals which go back to prototypes in use among the "old race" of the Nile Valley. The impression of a very active agency, indeed, is so strong that the possibility of some actual immigration into the island of the older Egyptian element, due to the conquests of the first Pharaohs, can not be excluded.

The continuous influence of dynastic Egypt from its earliest period onward is attested both by objects of import and their indigenous imitations, and an actual monument of a middle empire Egyptian was found in the Palace Court of Knossos. More surprising still are the cumulative proofs of the reaction of this early Cretan civilization on Egypt itself, as seen not only in the introduction there of such beautiful Minoan fabrics as the elegant polychrome bases but in the actual impress observable on Egyptian art even on its religious side. The Egyptian griffin is fitted with Minoan wings. So, too, on the other side we see the symbols of Egyptian religion impressed into the service of the Cretan nature goddess, who in certain respects

was partly assimilated with Hathor, the Egyptian cow goddess of the underworld.

My own most recent investigations have more and more brought home to me the all-pervading community between Minoan Crete and the land of the Pharoahs. When we realize the great indebtedness of the succeeding classical culture of Greece to its Minoan predecessor the full significance of this conclusion will be understood. Ancient Egypt itself can no longer be regarded as something apart from general human history. Its influences are seen to lie about the very cradle of our own civilization.

The high early culture, the equal rival of that of Egypt and Babylonia, which thus began to take its rise in Crete in the fourth millennium before our era, flourished for some two thousand years, eventually dominating the Ægean and a large part of the Mediterranean Basin. To the civilization, as a whole, I ventured, from the name of the legendary king and lawgiver of Crete, to apply the name of "Minoan," which has received general acceptance; and it has been possible now to divide its course into three ages—early, middle, and late, answering roughly to the successive Egyptian kingdoms, and each in turn with a triple subdivision.

It is difficult, indeed, in a few words to do adequate justice to this earliest of European civilizations. Its achievements are too manifold. The many-storied palaces of the Minoan priest kings in their great days, by their ingenious planning, their successful combination of the useful with the beautiful and stately, and last but not least, by their scientific sanitary arrangements far outdid the similar works, on however vast a scale, of Egyptian or Babylonian builders. What is more, the same skillful and commodious construction recurs in a whole series of private mansions and smaller dwellings throughout the island. Outside "broad Knossos" itself flourishing towns spring up far and wide on the country sides. New and refined crafts were developed, some of them like that of the inlaid metal work, unsurpassed in any age or country. Artistic skill, of course, reached its acme in the great palaces themselves, the corridors, landings, and porticoes of which were decked with wall paintings and high reliefs, showing in the treatment of animal life not only an extraordinary grasp of nature but a grandiose power of composition such as the world had never seen before. Such were the great bull-grappling reliefs of the sea gate at Knossos and the agonistic scenes of the great palace hall.

The modernness of much of the life here revealed to us is astonishing. The elaboration of the domestic arrangements, the staircases story above story, the front places given to the ladies at shows, their fashionable flounced robes and jackets, the gloves sometimes seen on their hands or hanging from their folding chairs, their

very mannerisms as seen on the frescoes, pointing their conversation with animated jestures—how strangely out of place would it all appear in a classical design. Nowhere, not even at Pompeii, have more living pictures of ancient life been called up for us than in the Minoan Palace of Knossos. The touches supplied by its closing scene are singularly dramatic—the little bathroom opening out of the Queen's parlor, with its painted clay bath, the royal draught-board flung down in the court, the vessels for anointing and the oil jar for their filling ready to hand by the throne of the priest-king, with the benches of his consistory round and the sacred griffins on either side. Religion, indeed, entered in at every turn. The palaces were also temples, the tomb a shrine of the great mother. It was perhaps owing to the religious control of art that among all the Minoan representations—now to be numbered by thousands—no single example of indecency has come to light.

A remarkable feature of this Minoan civilization can not be passed over. I remember that at the Liverpool meeting of this association in 1896—just before the first results of the new discoveries in Crete were known—a distinguished archeologist took as the subject of an evening lecture "Man before writing," and, as a striking example of a high culture attained by "Analfabeti," singled out that of Mycenæ—a late offshoot, as we know now, from Minoan Crete. To such a conclusion, based on negative evidence, I confess I could never subscribe—for had not even the people of the Reindeer Age attained to a considerable proficiency in expression by means of symbolic signs? To-day we are able to trace the gradual evolution on Cretan soil of a complete system of writing from its earliest pictographic shape, through a conventionalized hieroglyphic to a linear stage of great perfection. In addition to inscribed sealings and other records some 2,000 clay tablets have now come to light, mostly inventories or contracts; for though the script itself is still undeciphered the pictorial figures that often appear on these documents supply a valuable clue to their contents. The numeration also is clear, with figures representing sums up to 10,000. The inscribed sealings, signed, countermarked, and countersigned by controlling officials, give a high idea of the elaborate machinery of government and administration under the Minoan rulers.

The minutely organized legal conditions to which this points confirm the later traditions of Minos, the great lawgiver of prehistoric Crete, who, like Hammurabi and Moses, was said to have received the law from the God of the Sacred Mountain. The clay tablets themselves were certainly due to oriental influences, which make themselves perceptible in Crete at the beginning of the late Minoan Age, and may have been partly resultant from the reflex action of

Minoan colonization in Cyprus. From this time onward eastern elements are more and more traceable in Cretan culture and are evidenced by such phenomena as the introduction of chariots—themselves perhaps more remotely of Aryan-Iranian derivation—and by the occasional use of cylinder seals.

Simultaneously with its eastern expansion, which affected the coast of Phœnicia and Palestine as well as Cyprus, Minoan civilization now took firm hold of mainland Greece, while traces of its direct influence are found in the west Mediterranean basin—in Sicily, the Balearic Islands, and Spain. At the time of the actual conquest and during the immediately succeeding period the civilization that appears at Mycenæ and Tiryns, at Thebes and Orchomenos, and at other centers of mainland Greece, though it seems to have brought with it some already assimilated Anatolian elements, is still in the broadest sense Minoan. It is only at a later stage that a more provincial offshoot came into being to which the name Mycenæan can be properly applied. But it is clear that some vanguard at least of the Aryan Greek immigrants came into contact with this high Minoan culture at a time when it was still in its most flourishing condition. The evidence of Homer itself is conclusive. Arms and armor described in the poems are those of the Minoan prime, the fabled shield of Achilles, like that of Herakles described by Hesiod, with its elaborate scenes and variegated metal work, reflects the masterpieces of Minoan craftsmen in the full vigor of their art; the very episodes of epic combat receive their best illustration on the signets of the great days of Mycenæ. Even the lyre to which the minstrel sang was a Minoan invention. Or, if we turn to the side of religion, the Greek temple seems to have sprung from a Minoan hall, its earliest pediment schemes are adaptations from the Minoan tympanum—such as we see in the Lion's Gate—the most archaic figures of the Hellenic goddesses, like the Spartan Orthia, have the attributes and attendant animals of the great Minoan mother.

Some elements of the old culture were taken over on the soil of Hellas. Others which had been crushed out in their old centers survived in the more eastern shores and islands formerly dominated by Minoan civilization, and were carried back by Phœnician or Ionian intermediaries to their old homes. In spite of the overthrow which about the twelfth century before our era fell on the old Minoan dominion and the onrush of the new conquerors from the north, much of the old tradition still survived to form the base for the fabric of the later civilization of Greece. Once more, through the darkness, the lighted torch was carried on, the first glimmering flame of which had been painfully kindled by the old cave dwellers in that earlier Paleolithic world.

The Roman Empire, which in turn appropriated the heritage that Greece had received from Minoan Crete, placed civilization on a broader basis by welding together heterogeneous ingredients and promoting a cosmopolitan ideal. If even the primeval culture of the Reindeer Age embraced more than one race and absorbed extraneous elements from many sides, how much more is that the case with our own which grew out of the Greco-Roman! Civilization in its higher form to-day, though highly complex, forms essentially a unitary mass. It has no longer to be sought out in separate luminous centers, shining like planets through the surrounding night. Still less is it the property of one privileged country or people. Many as are the tongues of mortal men, its votaries, like the immortals, speak a single language. Throughout the whole vast area illumined by its quickening rays, its workers are interdependent and pledged to a common cause. * * *

— 1339 —

THE PALACE OF MINOS.

BY

ARTHUR J. EVANS.

FROM THE SMITHSONIAN REPORT FOR 1901, PAGES 425–437
(WITH PLATES I–VIII).

WASHINGTON:
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THE PALACE OF MINOS.[a]

By Arthur J. Evans.

Less than a generation back the origin of Greek civilization, and with it the sources of all great culture that has ever been, were wrapped in an impenetrable mist. That ancient world was still girt round within its narrow confines by the circling "stream of ocean." Was there anything beyond? The fabled kings and heroes of the Homeric Age, with their palaces and strongholds, were they aught, after all, but more or less humanized sun myths?

One man had faith, accompanied by works, and in Dr. Schliemann the science of classical antiquity found its Columbus. Armed with the spade he brought to light from beneath the mounds of ages a real Troy; at Tiryns and Mycenæ he laid bare the palace and the tombs and treasures of Homeric kings. A new world opened to investigation, and the discoveries of its first explorer were followed up successfully by Dr. Tsountas and others on Greek soil. The eyes of observers were opened, and the traces of this prehistoric civilization began to make their appearance far beyond the limits of Greece itself. From Cyprus and Palestine to Sicily and southern Italy, and even to the coasts of Spain, the colonial and industrial enterprise of the "Mycenæans" has left its mark throughout the Mediterranean basin. Professor Petrie's researches in Egypt have conclusively shown that as early at least as the close of the Middle Kingdom, or, approximately speaking, the beginning of the second millennium B. C., imported

[a] Reprinted from the Monthly Review, Vol. II, London, January–March, 1901, pp. 115–132. The most scientific account of the exploration of the Cretan labyrinth is the official statement of Mr. Evans in the Annual of the British School at Athens, 1899–1900. The following is a brief list of papers on the subject by men who speak with authority: (1) Paul Walters in Arch., August, 1900, 3, pp. 141–151 (pl.; 6 figs.); (2) Mr. Evans, Biblia, September, 1900; (3) Mr. Evans and Mr. D. E. Hogarth, Biblia, January, 1901 (see also Biblia, November and December, 1900); (4) Mr. Louis Dyer, the Nation, August 2, 1900; (5) Mr. Evans, Murray's Monthly Magazine, February, 1901, and (6) Mr. Hogarth in the Contemporary Review, December, 1900. In Biblia, 1901, pp. 121–128, Mr. Evans describes the recent discoveries at Knossus up to the middle of May; and the Nation, June 27, 1901, contains extracts from letters of Mr. Evans to the Times dated May 16 and June 12, telling of the latest results.

Ægean vases were finding their way into the Nile Valley. By the great days of the eighteenth dynasty, in the sixteenth and succeeding centuries B. C., this intercourse was of such a kind that Mycenæan art, now in its full maturity of bloom, was reacting on that of the contemporary Pharaohs and infusing a living European element into the old conventional style of the land of the Pyramids and the Sphinx.

But the picture was still very incomplete. Nay, it might even be said that its central figure was not yet filled in. In all these excavations and researches the very land to which ancient tradition unanimously pointed as the cradle of Greek civilization had been left out of count. To adapt the words applied by Gelon to slighted Sicily and Syracuse, "The spring was wanting from the year" of that earlier Hellas. Yet Crete, the central island—a half-way house between three continents—flanked by the great Libyan promontory and linked by smaller island stepping stones to the Peloponnese and the mainland of Anatolia, was called upon by nature to play a leading part in the development of the early Ægean culture.

Here, in his royal city of Knossos, ruled Minos, or whatever historic personage is covered by that name, and founded the first sea empire of Greece, extending his dominion far and wide over the Ægean isles and coast lands. Athens paid to him its human tribute of youths and maidens. His colonial plantations extended east and west along the Mediterranean basin till Gaza worshipped the Cretan Zeus and a Minoan city rose in western Sicily. But it is as the first lawgiver of Greece that he achieved his greatest renown, and the code of Minos became the source of all later legislation. As the wise ruler and inspired lawgiver there is something altogether biblical in his legendary character. He is the Cretan Moses, who every nine years repaired to the cave of Zeus, whether on the Cretan Ida or on Dicta, and received from the god of the mountain the laws for his people. Like Abraham, he is described as the "friend of God." Nay, in some accounts, the mythical being of Minos has a tendency to blend with that of his native Zeus.

This Cretan Zeus, the god of the mountain, whose animal figure was the bull and whose symbol was the double ax, had indeed himself a human side, which distinguishes him from his more ethereal namesake of classical Greece. In the great cave of Mount Dicta, whose inmost shrine, adorned with natural pillars of gleaming stalactite, leads deep down to the waters of an unnavigated pool, Zeus himself was said to have been born and fed with honey and goat's milk by the nymph Amaltheia. On the conical height immediately above the site of Minos's city—now known as Mount Juktas—and still surrounded by a Cyclopean inclosure, was pointed out his tomb. Classical Greece scoffed at this primitive legend, and for this particular reason first gave currency to the proverb that "the Cretans are always liars." St. Paul, too, adopted this hard saying, but in Crete itself the new

religion, which here, as elsewhere, so eagerly availed itself of what might aid its own propaganda in existing belief, seems to have dealt more gently with the scenes of the lowly birth and holy sepulcher of a mortal god. On the height of Juktas, on the peaks of Dicta, which overlooked, one the birthplace, the other the temple of the Cretan Zeus, pious hands have built chapels, the scenes of annual pilgrimage, dedicated to Authentés Christos, "the Lord Christ." In his shrine at Gaza the Minoan Zeus had already in pagan days received the distinguished epithet of Marnas, "the lord" in its Syrian form.

If Minos was the first lawgiver, his craftsman Dædalus was the first traditional founder of what may be called a "school of art." Many were the fabled works wrought by them for King Minos, some grewsome, like the brass man Talos. In Knossos, the royal city, he built the dancing ground, or "choros," of Ariadne, and the famous labyrinth. In its inmost maze dwelt the minotaur, or "bull of Minos," fed daily with human victims, till such time as Theseus, guided by Ariadne's ball of thread, penetrated to its lair, and, after slaying the monster, rescued the captive youths and maidens. Such, at least, was the Athenian tale. A more prosaic tradition saw in the labyrinth a building of many passages, the idea of which Dædalus had taken from the great Egyptian mortuary temple on the shores of Lake Moeris, to which the Greeks gave the same name; and recent philological research has derived the name itself from the labrys, or double ax, the emblem of the Cretan and Carian Zeus.

Mythological speculation has seen in the labyrinth, to use the words of a learned German, "a thing of belief and fancy, an image of the starry heaven with its infinitely winding paths, in which, nevertheless, the sun and moon so surely move about." We shall see that the spade has supplied a simpler solution.

When one calls to mind these converging lines of ancient tradition it becomes impossible not to feel that, without Crete, "the spring is taken away" indeed from the Mycenæan world. Great as were the results obtained by exploration on the sites of this ancient culture on the Greek mainland and elsewhere, there was still a sense of incompleteness. In nothing was this more striking than in the absence of any written document. A few signs had, indeed, been found on a vase handle, but these were set aside as mere ignorant copies of Hittite or Egyptian hieroglyphs. In the volume of his monumental work which deals with Mycenæan art, M. Perrot was reduced to the conclusion that, "as at present advised, we can continue to affirm that for the whole of this period, neither in Peloponnese nor in central Greece, no more upon the buildings nor upon the thousand and one objects of domestic use and luxury that have come forth from the tombs, has anything been discovered that resembles any form of writing."

But was this, indeed, the last word of scientific exploration? Was

it possible that a people so advanced in other respects—standing in such intimate relations with Egypt and the Syrian lands where some form of writing had been an almost immemorial possession—should have been absolutely wanting in this most essential element of civilization? I could not believe it. Once more one's thoughts turned to the land of Minos, and the question irresistibly suggested itself—was that early heritage of fixed laws compatible with a complete ignorance of the art of writing? An abiding tradition of the Cretans themselves, preserved by Diodoros, shows that they were better informed. The Phœnicians, they said, had not invented letters; they had simply changed their forms; in other words, they had only improved on an existing system.

It is now seven years since a piece of evidence came into my hands which went far to show that long before the days of the introduction of the Phœnician alphabet, as adopted by the later Greeks, the Cretans were, in fact, possessed of a system of writing. While hunting out ancient engraved stones at Athens I came upon some three and four sided seals showing on each of their faces groups of hieroglyphic and linear signs distinct from the Egyptian and Hittite, but evidently representing some form of script. On inquiry I learned that these seals had been found in Crete. A clue was in my hands, and, like Theseus, I resolved to follow it, if possible to the inmost recesses of the labyrinth. That the source and center of the great Mycenæan civilization remained to be unearthed on Cretan soil I had never doubted, but the prospect now opened of finally discovering its written records.

From 1894 onward I undertook a series of campaigns of exploration chiefly in central and eastern Crete. In all directions fresh evidence continually came to light—Cyclopean ruins of cities and strongholds, beehive tombs, vases, votive bronzes, exquisitely engraved gems—amply demonstrating that in fact the great days of that "island story" lay far behind the historic period. From the Mycenæan sites of Crete I obtained a whole series of inscribed seals, such as I had first noticed at Athens, showing the existence of an entire system of hieroglyphic or quasi pictorial writing, with here and there signs of the coexistence of more linear forms. From the great cave of Mount Dicta—the birthplace of Zeus—the votive deposits of which have now been thoroughly explored by Mr. Hogarth, I procured a stone libation table inscribed with a dedication of several characters in the early Cretan script. But for more exhaustive excavation my eyes were fixed on some ruined walls, the great gypsum blocks of which were engraved with curious symbolic characters, that crowned the southern slope of a hill known as Kephala, overlooking the ancient site of Knossos, the city of Minos. They were evidently part of a large prehistoric building. Might one not uncover here the palace of King Minos—perhaps even the mysterious labyrinth itself?

These blocks had already arrested the attention of Schliemann and others, but the difficulties raised by the native proprietors had defeated all efforts at scientific exploration. In 1895 I succeeded in acquiring a quarter of the site from one of the joint owners. But the obstruction continued, and I was beset by difficulties of a more serious kind. The circumstances of the time were not favorable. The insurrection had broken out, half the villages in Crete were in ashes, and in the neighboring town of Candia the most fanatical part of the Mohammedan population were collected together from the whole of the island. The faithful Herakles, who was at that time my "guide, philosopher, and muleteer," was seized by the Turks and thrown into a loathsome dungeon, from which he was with difficulty rescued. Soon afterwards the inevitable massacre took place, of which the nominal British "occupants" of Candia were in part themselves the victims. Then at last the sleeping lion was aroused. Under the guns of Admiral Noel the Turkish commander evacuated the Government buildings at ten minutes' notice and shipped off the Sultan's troops. Crete once more was free.

At the beginning of this year I was at last able to secure the remaining part of the site of Kephala, and with the consent of Prince George's Government at once set about the work of excavation. I received some pecuniary help from the recently started Cretan exploration fund, and was fortunate in securing the services of Mr. Duncan Mackenzie, who had done good work for the British school in Melos, to assist me in directing the works. From about 80 to 150 men were employed in the excavation, which continued till the heat and fevers of June put an end to it for this season.

The result has been to uncover a large part of a vast prehistoric building—a palace with its numerous dependencies, but a palace on a far larger scale than those of Tiryns and Mycenæ. About 2 acres of this has been unearthed, for, by an extraordinary piece of good fortune, the remains of walls began to appear only a foot or so, often only a few inches, below the surface. This dwelling of prehistoric kings had been overwhelmed by a great catastrophe. Everywhere on the hilltop were traces of a mighty conflagration; burnt beams and charred wooden columns lay within the rooms and corridors. There was here no gradual decay. The civilization represented on this spot had been cut short in the fullness of its bloom. Nothing later than remains of the good Mycenæan period was found over the whole site; nothing even so late as the last period illustrated by the remains of Mycenæ itself. From the day of destruction to this the site has been left entirely desolate. For three thousand years or more not a tree seems to have been planted here; over a part of the area not even a plowshare had passed. At the time of the great overthrow, no doubt, the place had been methodically plundered for metal objects,

and the fallen débris in the rooms and passages turned over and ransacked for precious booty. Here and there a local bey or peasant had grubbed for stone slabs to supply his yard or thrashing floor. But the party walls of clay and plaster still stood intact, with the fresco painting on them, still in many cases perfectly preserved at a few inches depth from the surface, a clear proof of how severely the site had been let alone for these long centuries.

Who were the destroyers? Perhaps the Dorian invaders, who seem to have overrun the island about the eleventh or twelfth century before our era. More probably, still earlier invading swarms from the mainland of Greece. The palace itself had a long antecedent history and there are frequent traces of remodeling. Its early elements may go back a thousand years before its final overthrow, since, in the great eastern court, was found the lower part of an Egyptian seated figure of diorite, with a triple inscription, showing that it dates back to the close of the twelfth or the beginning of the thirteenth dynasty of Egypt; in other words, approximately to 2,000 B. C. But below the foundation of the later building, and covering the whole hill, are the remains of a primitive settlement of still greater antiquity, belonging to the insular Stone Age. In parts this "Neolithic" deposit was over 24 feet thick, everywhere full of stone axes, knives of volcanic glass, dark polished and incised pottery, and primitive images, such as those found by Schliemann in the lowest strata of Troy.

The outer walls of the palace were supported on huge gypsum blocks, but there was no sign of an elaborate system of fortification such as at Tiryns and Mycenæ. The reason of this is not far to seek. Why is Paris strongly fortified, while London is practically an open town? The city of Minos, it must be remembered, was the center of a great sea power, and it was in "wooden walls" that its rulers must have put their trust. The mighty blocks of the palace show, indeed, that it was not for want of engineering power that the acropolis of Knossos remained unfortified. But in truth Mycenæan might was here at home. At Tiryns and Mycenæ itself it felt itself threatened by warlike continental neighbors. It was not till the mainland foes were masters of the sea that they could have forced an entry into the house of Minos. Then, indeed, it was an easy task. In the cave of Zeus on Mount Ida was found a large brooch (or fibula) belonging to the race of northern invaders, on one side of which a war galley is significantly engraved.

The palace was entered on the southwest side by a portico and double doorway opening from a spacious paved court (fig. 1). Flanking the portico were remains of a great fresco of a bull, and on the walls of the corridor leading from it were still preserved the lower part of a procession of painted life-size figures, in the center of which was a female personage, probably a queen, in magnificent apparel. This corridor seems to have led round to a great southern porch or Propy-

Column base. Square base of altar. Base of west wall of palace, of gypsum blocks.

FIG. 1.—WESTERN COURT OF THE PALACE, KNOSSOS, SEEN FROM SOUTHWEST PORTICO.

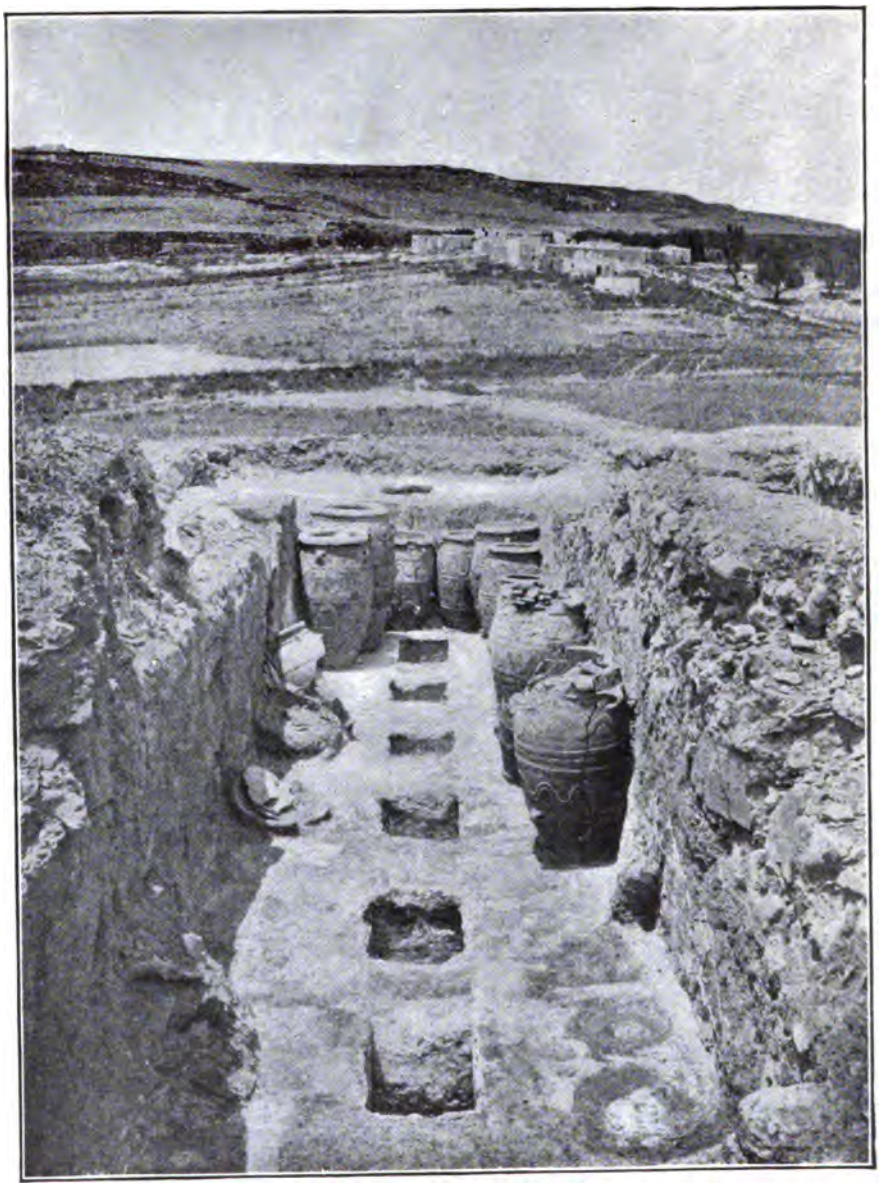

FIG. 2.—MAGAZINE NO. 5, SHOWING GREAT STORE JARS.

FIG. 3.—LARGE CLAY STORE JAR.

Four entrances opening on east court. Stone bench with pilasters. Gypsum blocks of corridor with incised symbols.

FIG. 4.—ANTECHAMBER TO THRONE ROOM, SEEN FROM ITS NORTHERN ENTRANCE.

Stone breastwork of tank with sockets for wooden columns. Doorway of inner chamber. Stone bench and fallen pieces of fresco. Gypsum throne between lower benches. Corner of antechamber.

FIG. 5.—THRONE ROOM FROM ANTECHAMBER.

læum with double columns, the walls of which were originally decorated with figures in the same style. Along nearly the whole length of the building ran a spacious paved corridor, lined by a long row of fine stone doorways, giving access to a succession of magazines. On the floor of these magazines huge store jars were still standing, large enough to have contained the "forty thieves" (fig. 2). One of these jars, contained in a small separate chamber, was nearly 5 feet in height (fig. 3).

Here occurred one of the most curious discoveries of the whole excavation. Under the closely compacted pavement of one of these magazines, upon which the huge jars stood, there were built in between solid piles of masonry double tiers of stone cists lined with lead. Only a few were opened and they proved to be empty, but there can be little doubt that they were constructed for the deposit of treasure. Whoever destroyed and plundered the palace had failed to discover these receptacles, so that when more come to be explored there is some real hope of finding buried hoards.

On the east side of the palace opened a still larger paved court, approached by broad steps from another principal entrance to the north. From this court access was given by an anteroom (fig. 4) to what was certainly the most interesting chamber of the whole building, almost as perfectly preserved—though some twelve centuries older—as anything found beneath the volcanic ash of Pompeii or the lava of Herculaneum. Already a few inches below the surface freshly preserved fresco began to appear. Walls were shortly uncovered decorated with flowering plants and running water, while on each side of the doorway of a small inner room stood guardian griffins with peacocks' plumes in the same flowery landscape. Round the walls ran low stone benches, and between these on the north side, separated by a small interval and raised on a stone base, rose a gypsum throne with a high back, and originally colored with decorative designs. Its lower part was adorned with a curiously carved arch, with crocketed moldings, showing an extraordinary anticipation of some most characteristic features of Gothic architecture. Opposite the throne was a finely wrought tank of gypsum slabs—a feature borrowed perhaps from an Egyptian palace—approached by a descending flight of steps, and originally surmounted by cyprus-wood columns supporting a kind of impluvium. Here truly was the council chamber of a Mycenæan king or sovereign lady. It may be said to-day that the youngest of European rulers has in his dominions the oldest throne in Europe (fig. 5).

The frescoes discovered on the palace site constitute a new epoch in the history of painting. Little, indeed, of the kind even of classical Greek antiquity has been hitherto known earlier at least than the Pompeian series. The first find of this kind marks a red-letter day in the story of the excavation. In carefully uncovering the earth and débris in a passage at the back of the southern Propylæum there came

to light two large fragments of what proved to be the upper part of a youth bearing a gold-mounted silver cup (fig. 6). The robe is decorated with a beautiful quarterfoil pattern; a silver ornament appears in front of the ear, and silver rings on the arms and neck. What is specially interesting among the ornaments is an agate gem on the left wrist, thus illustrating the manner of wearing the beautifully engraved signets of which many clay impressions were found in the palace.

The colors were almost as brilliant as when laid down over three thousand years before. For the first time the true portraiture of a man of this mysterious Mycenæan race rises before us. The flesh tint, following perhaps an Egyptian precedent, is of a deep reddish brown. The limbs are finely molded, though the waist, as usual in Mycenæan fashions, is tightly drawn in by a silver-mounted girdle, giving great relief to the hips. The profile of the face is pure and almost classically Greek. This, with the dark curly hair and high brachycephalic head, recalls an indigenous type well represented still in the glens of Ida and the White Mountains—a type which brings with it many reminiscences from the Albanian highlands and the neighboring regions of Montenegro and Herzegovina. The lips are somewhat full, but the physiognomy has certainly no Semetic cast. The profile rendering of the eye shows an advance in human portraiture foreign to Egyptian art, and only achieved by the artists of classical Greece in the early fine-art period of the fifth century B. C.—after some eight centuries, that is, of barbaric decadence and slow revival.

There was something very impressive in this vision of brilliant youth and of male beauty, recalled after so long an interval to our upper air from what had been till yesterday a forgotten world. Even our untutored Cretan workmen felt the spell and fascination. They, indeed, regarded the discovery of such a painting in the bosom of the earth as nothing less than miraculous, and saw in it the "icon" of a saint. The removal of the fresco required a delicate and laborious process of underplastering, which necessitated its being watched at night, and old Manolis, one of the most trustworthy of our gang, was told off for the purpose. Somehow or other he fell asleep, but the wrathful saint appeared to him in a dream; waking with a start, he was conscious of a mysterious presence; the animals round began to low and neigh and "there were visions about;" "φαντάζει," he said, in summing up his experiences next morning, "the whole place spooks!"

To the north of the palace, in some rooms that seem to have belonged to the women's quarter, frescoes were found in an entirely novel miniature style. Here were ladies with white complexions—due, we may fancy, to the seclusion of harem life—décolletés, but with fashionable puffed sleeves and flounced gowns, and their hair as elaborately curled and frisé as if they were fresh from a coiffeur's hands.

FIG. 6.—FRESCO OF THE CUPBEARER (ORIGINAL LIFE SIZE).

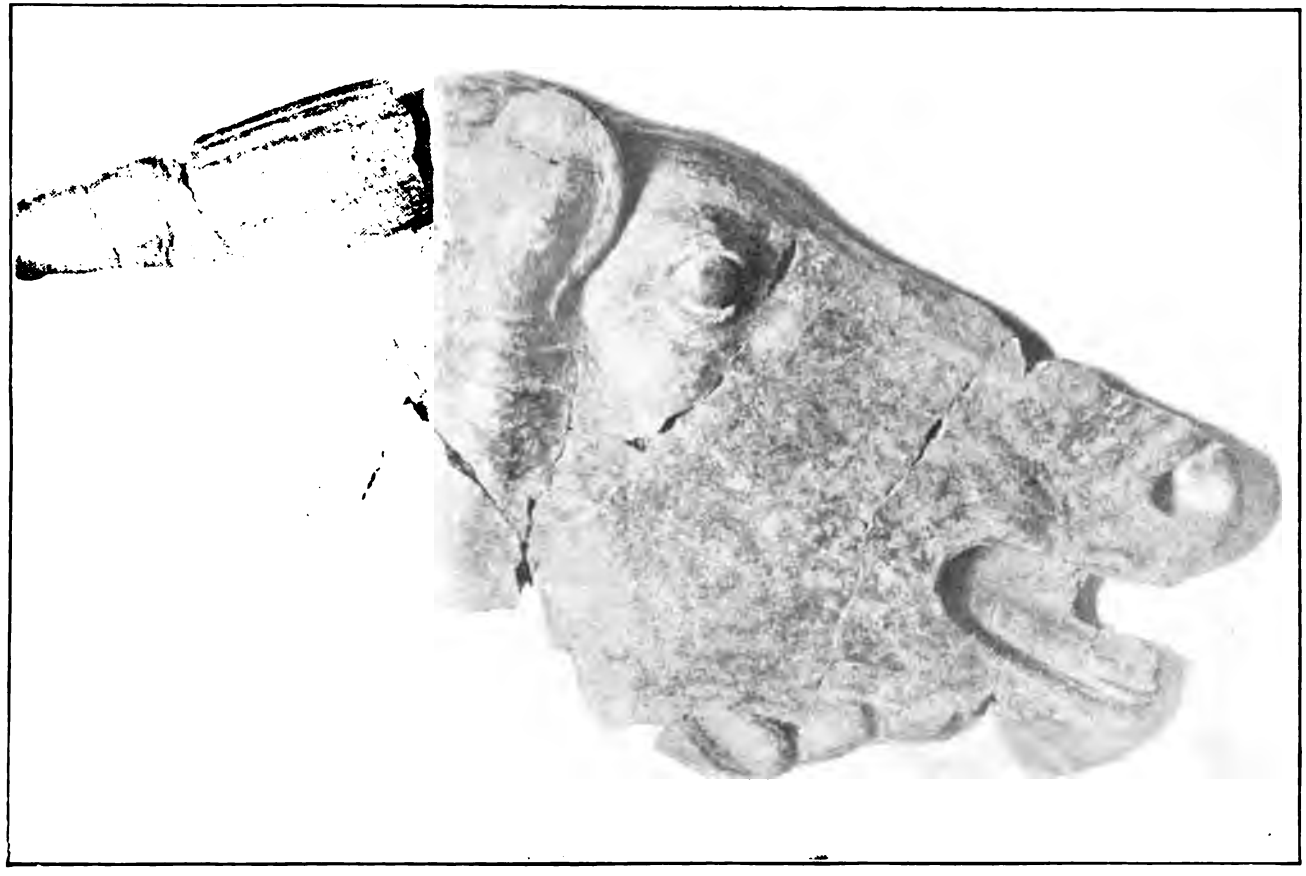

FIG. 7.—RELIEF OF BULL'S HEAD IN COLORED GESSO DURO (ORIGINAL LIFE SIZE).

"Mais," exclaimed a French savant who honored me with a visit, "ces sont des Parisiennes!"

They were seated in groups, engaged in animated conversation, in the courts and gardens and on the balconies of a palatial building, while in the walled spaces beyond were large crowds of men and boys, some of them hurling javelins. In some cases both sexes were intermingled. These alternating scenes of peace and war recall the subjects of Achilles' shield, and we have here at the same time a contemporary illustration of that populousness of the Cretan cities in the Homeric age which struck the imagination of the bard. Certain fragments of fresco belong to the still earlier period of Ægean art, which precedes the Mycenæan, well illustrated in another field by the elegant painted vases found by Mr. Hogarth in some private houses on this site. A good idea of the refinement already reached in these earlier days of the palace is given by the subject of one fresco fragment in this "pre-Mycenæan" style—namely, a boy, in a field of white crocuses, some of which he has gathered and is placing in an ornamental vase.

Very valuable architectural details were supplied by the walls and buildings of some of the miniature frescoes above described. In one place rose the façade of a small temple, with triple cells, containing sacred pillars, and representing in a more advanced form the arrangement of the small golden shrines, with doves perched upon them, found by Schliemann in the shaft graves at Mycenæ. This temple fresco has a peculiar interest, as showing the character of a good deal of the upper structure of the palace itself, which has now perished. It must largely have consisted of clay and rubble walls, artfully concealed under brilliantly painted plaster, and contained and supported by a woodwork framing. The base of the small temple rests on the huge gypsum blocks which form so conspicuous a feature in the existing remains, and below the central opening is inserted a frieze, recalling the alabaster reliefs of the palace hall of Tiryns, with triglyphs, the prototypes of the Doric, and the half-rosettes of the "metopes" inlaid with blue enamel, the Kyanos of Homer.

A transition from painting to sculpture was supplied by a great relief of a bull in hard plaster, colored with the natural tints, large parts of which, including the head, were found near the northern gate. It is unquestionably the finest plastic work of the time that has come down to us, stronger and truer to life than any classical sculpture of the kind (fig. 7).

Somewhat more conventional, but still showing great naturalistic power, is the marble head of a lioness, made for the spout of a fountain. It, too, had been originally tinted, and the eyes and nostrils inlaid with brightly colored enamels. A part of a stone frieze, with finely undercut rosettes, recalled similar fragments from Tiryns and Mycenæ, but far surpasses them in execution.

Vases of marble and other stones abounded, some exquisitely carved. Among these was one cut out of alabaster in the shape of a great Triton shell, every coil and fold of which was accurately reproduced. A porphyry lamp, supported on a quatrefoil pillar, with a beautiful lotus capital, well illustrates the influence of an Egyptian model. But the model was here surpassed.

Among the more curious arts practiced in prehistoric Knossos was that of miniature painting on the back of plaques of crystal. A galloping bull thus delineated on an azure background is a little masterpiece in its way. A small relief on a banded agate, representing a dagger in an ornamental sheath resting on an artistically folded belt, to a certain extent anticipates by many centuries the art of cameo carving. A series of clay seals were also discovered, exhibiting impressions of intaglios in the fine bold Mycenæn style; one of these, with two bulls, larger than any known signet gem of the kind, may well have been a royal seal. The subjects of some of these intaglios show the development of a surprisingly picturesque style of art. We see fish naturalistically grouped in a rocky pool, a hart beside a water brook in a mountain glen, and a grotto, above which some small monkey-like creatures are seen climbing the overhanging crags.

But manifold as were the objects of interest found within the palace walls of Knossos, the crowning discovery—or, rather, series of discoveries—remains to be told. On the last day of March, not far below the surface of the ground, a little to the right of the southern portico, there turned up a clay tablet of elongated shape, bearing on it incised characters in a linear script, accompanied by numeral signs. My hopes now ran high of finding entire deposits of clay archives, and they were speedily realized. Not far from the scene of the first discovery there came to light a clay receptacle containing a hoard of tablets. In other chambers occurred similar deposits, which had originally been stored in coffers of wood, clay, or gypsum. The tablets themselves are of various forms, some flat, elongated bars, from about 2 to 7½ inches in length, with wedge-like ends; others, larger and squarer, ranging in size to small octavo (fig. 8). In one particular magazine tablets of a different kind were found—perforated bars, crescent and scallop-like "labels," with writing in the same hieroglyphic style as that on the seals found in eastern Crete. But the great mass, amounting to over a thousand inscriptions, belonged to another and more advanced system with linear characters. It was, in short, a highly developed form of script, with regular divisions between the words, and for elegance hardly surpassed by any later form of writing.

A clue to the meaning of these clay records is in many cases supplied by the addition of pictorial illustrations representing the objects concerned. Thus we find human figures, perhaps slaves; chariots and horses; arms or implements and armor, such as axes and cuirasses;

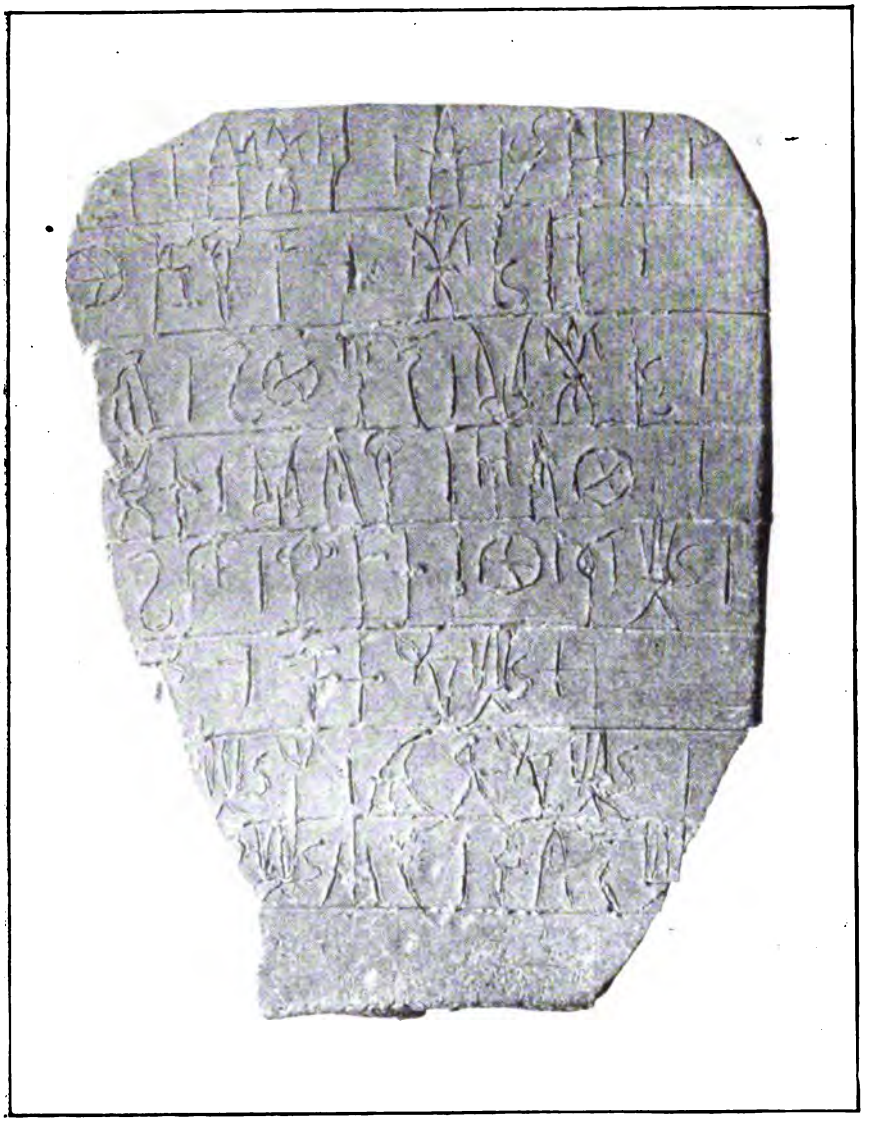

FIG. 8.—CLAY TABLET WITH THE LINEAR PREHISTORIC SCRIPT.

houses or barns; ears of barley or other cereals; swine; various kinds of trees, and a long-stamened flower, evidently the saffron crocus, used for dyes. On some tablets appear ingots, probably of bronze, followed by a balance (the Greek τάλαντον), and figures which probably indicate their value in Mycenæan gold talents. The numerals attached to many of these objects show that we have to do with accounts referring to the royal stores and arsenals.

Some tablets relate to ceramic vessels of various forms, many of them containing marks indicative of their contents. Others, still more interesting, show vases of metallic forms, and obviously relate to the royal treasures. It is a highly significant fact that the most characteristic of these, such as a beaker like the famous gold cups found in the Vapheio tomb near Sparta, a high-spouted ewer and an object, perhaps representing a certain weight of metal, in the form of an ox's head, recur—together with the ingots with incurving sides among the gold offerings in the hands of the tributary Ægean princes—on Egyptian monuments of Thothmes III's time. These tributary chieftains, described as Kefts and people of the isles of the sea, who have been already recognized as the representatives of the Mycenæan culture, recall in their dress and other particulars the Cretan youths, such as the cupbearer above described, who take part in the processional scenes on the palace frescoes. The appearance in the records of the royal treasury at Knossos of vessels of the same form as those offered by them to Pharaoh is itself a valuable indication that some of these clay archives approximately go back to the same period—in other words, to the beginning of the fifteenth century B. C.

Other documents, in which neither ciphers nor pictorial illustrations are to be found, may appeal even more deeply to the imagination. The analogy of the more or less contemporary tablets, written in cuneiform script, found in the palace of Tell-el-Amarna, might lead us to expect among them the letters from distant governors or diplomatic correspondence. It is probable that some are contracts or public acts, which may give some actual formulas of Minoan legislation. There is, indeed, an atmosphere of legal nicety, worthy of the house of Minos, in the way in which these clay records were secured. The knots of string which, according to the ancient fashion, stood in the place of locks for the coffers containing the tablets, were rendered inviolable by the attachment of clay seals, impressed with the finely engraved signets, the types of which represent a great variety of subjects, such as ships, chariots, religious scenes, lions, bulls, and other animals. But, as if this precaution was not in itself considered sufficient, while the clay was still wet the face of the seal was countermarked by a controlling official, and the back countersigned and indorsed by an inscription in the same Mycenæan script as that inscribed on the tablets themselves.

Much study and comparison will be necessary for the elucidation of these materials, which it may be hoped will be largely supplemented by the continued exploration of the palace. If, as may well be the case, the languge in which they were written was some primitive form of Greek we need not despair of the final decipherment of these Knossian archives, and the bounds of history may eventually be so enlarged as to take in the "heroic age" of Greece. In any case the weighty question, which years before I had set myself to solve on Cretan soil, has found, so far at least, an answer. That great early civilization was not dumb, and the written records of the Hellenic world are carried back some seven centuries beyond the date of the first known historic writings. But what, perhaps, is even more remarkable than this is that, when we examine in detail the linear script of these Mycenæan documents, it is impossible not to recognize that we have here a system of writing, syllabic and perhaps partly alphabetic, which stands on a distinctly higher level of development than the hieroglyphs of Egypt or the cuneiform script of contemporary Syria and Babylonia. It is not till some five centuries later that we find the first dated examples of Phœnician writing.

The signs already mentioned as engraved on the great gypsum blocks of the palace must be regarded as distinct from the script proper. These blocks go back to the earliest period of the building, and the symbols on them, which are of very limited selection, but of constant recurrence, seem to have had a religious significance. The most constantly recurring of these, indeed, is the labrys or double ax already referred to—the special symbol of the Cretan Zeus, votive deposits of which in bronze have been found in the cave sanctuaries of the god on Mount Ida and Mount Dicta. The double ax is engraved on the principal blocks, such as the corner stones and door jambs throughout the building, and recurs as a sign of dedication on every side of every block of a sacred pillar that forms the center of what seems to have been the inmost shrine of an aniconic cult connected with this indigenous divinity.

The "house of Minos" thus turns out to be also the house of the double ax—the labrys and its lord—in other words, it is the true Labyrinthos. The divine inspirer of Minos was not less the lord of the bull, and it is certainly no accidental coincidence that huge figures of bulls in painting and plaster occupied conspicuous positions within it. Nay, more, on a small steatite relief, a couchant bull is seen above the doorway of a building probably intended to represent the palace, and this would connect it in the most direct way with the sacred animal of the Cretan Zeus.

There can be little remaining doubt that this vast edifice, which in a broad historic sense we are justified in calling the "palace of Minos," is one and the same as the traditional "labyrinth." A great part

of the ground plan itself, with its long corridors and repeated succession of blind galleries, its tortuous passages and spacious underground conduit, its bewildering system of small chambers, does in fact present many of the characteristics of a maze.

Let us place ourselves for a moment in the position of the first Dorian colonists of Knossos after the great overthrow, when features now laboriously uncovered by the spade were still perceptible amid the mass of ruins. The name was still preserved, though the exact meaning, as supplied by the native Cretan dialect, had been probably lost. Hard by the western gate in her royal robes, to-day but partially visible, stood Queen Ariadne herself—and might not the comely youth in front of her be the hero Theseus, about to receive the coil of thread for his errand of liberation down the mazy galleries beyond? Within, fresh and beautiful on the walls of the inmost chambers, were the captive boys and maidens locked up here by the tyrant of old. At more than one turn rose a mighty bull, in some cases, no doubt, according to the favorite Mycenæan motive, grappled with by a half-naked man. The type of the Minotaur itself as a man-bull was not wanting on the soil of prehistoric Knossos, and more than one gem found on this site represents a monster with the lower body of a man and the forepart of a bull.

One may feel assured that the effect of these artistic creations on the rude Greek settler of those days was not less than that of the disinterred fresco on the Cretan workman of to-day. Everything around—the dark passages, the lifelike figures surviving from an older world—would conspire to produce a sense of the supernatural. It was haunted ground, and then, as now, "phantasms" were about. The later stories of the grisly king and his man-eating bull sprang, as it were, from the soil, and the whole site called forth a superstitious awe. It was left severely alone by the newcomers. Another Knossos grew up on the lower slopes of the hill to the north, and the old palace site became a "desolation and hissing." Gradually earth's mantle covered the ruined heaps, and by the time of the Romans the labyrinth had become nothing more than a tradition and a name.

THE DECORATIVE ART OF CRETE IN THE BRONZE AGE. EDITH H. HALL . . . . . .

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THE DECORATIVE ART OF CRETE IN THE BRONZE AGE.

INTRODUCTION.

When in 1878 Professor Furtwängler and Professor Löschcke were sorting the fragments of painted vases which had been brought into the Polytechnion in Athens from various "Mycenaean" sites in Greece, they found that, "with the exception of the spiral and of a few motives derived from weaving, all the patterns of vases with lustrous paint, even those in which delight in fanciful combinations of lines had guided the artist's hand, were, in their oldest forms, representations of natural objects.[1] The material available for a study of Mycenaean design has been greatly increased since this statement was made, especially by recent excavations in Crete. There ornamented objects have been brought to light from all the successive stages of a civilization which extended from the beginning to the end of the bronze age. The object of this paper is to ascertain how far the observation of Professor Furtwängler about the pottery known in 1878 holds good for this wider and better understood field of Cretan decorative art. If the character of the designs of Cretan vases be determined, the kind of ornament which appears in other prehistoric sites of the Aegean basin will be intelligible, since the culture of these places will be found to be parallel and akin to one stage or another of Cretan culture.

The English excavators in Crete have divided Cretan pottery of the bronze age into three periods, to which they give the names: 'Early Minoan,' 'Middle Minoan,' and 'Late Minoan.'[2] Each of these three periods is again divided into three subdivisions. The Cretan bronze-age pottery which has been published is arranged according to these nine divisions in the table opposite page 50. In parallel columns are arranged according to the same classification the most important decorated objects of early Cretan civilization other than pottery and also the bronze-age pottery from other sites in the Aegean basin.

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[1] See Furtwängler and Löschcke, *Mykenische Vasen*, Introduction, p. iv.

[2] See A. J. Evans, *Essai de classification des époques de la civilisation Minoenne*, and R. M. Dawkins, *B. S. A.* X, pp. 195 and 196.

References to the publications of this material are not invariably given in the text but are always to be found in the table.[1]

Classification of Designs.

To apprehend better the nature and importance of the beginnings of Cretan ornament, a statement of the various kinds of design found in Cretan decorative art throughout the course of the bronze age may well be made at the outset. These designs may be divided into two main classes:

1. Imitative Designs in which there is representation of things seen or thought. These include:

(a) *pure naturalistic designs* which represent in a realistic way natural objects or other naturalistic designs not yet degenerated by copying, e. g., Fig. 1;

(b) *conventional naturalistic designs* in which the artist accepts conventional methods of representing natural objects, e. g., Fig. 2;

(c) *conventionalized naturalistic designs* in which, because of long periods of mechanical copying, representations of natural objects are rendered in a stereotyped fashion, e. g., Fig. 3;

(d) *sacral designs* which represent sacred objects.

2. Non-imitative Designs or compositions of lines for the sake of balance, rhythm, and harmony[2] in which the element of representation is not found. These include:

(a) *simple, stock patterns,* like spirals, crescents, dots, etc.

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[1] The titles of periodicals quoted in this paper are abbreviated as follows:

A. J. A. = American Journal of Archaeology.
Arch. Anz. = Archäologischer Anzeiger, Beiblatt zum Jahrbuch des archäologischen Instituts.
Ant. Denk. = Antike Denkmäler.
Athen. Mitt. = Mitteilungen des kaiserlichen deutschen archäologischen Instituts. Athenische Abteilung.
B. C. H. = Bulletin de correspondance hellènique.
B. S. A. = Annual of the British School at Athens.
Ἐφ. Ἀρχ. = *Ἐφημερὶς Ἀρχαιολογική.*
J. H. S. = Journal of Hellenic Studies.
J. R. I. B. A. = Journal of the Royal Institute of British Architects.
Mon. Ant. = Monumenti Antichi.
Röm. Mitt. = Mitteilungen des kaiserlichen deutschen archäologischen Instituts. Römische Abteilung.
Transactions = Transactions of the Department of Archaeology of the University of Pennsylvania.

[2] Compare D. W. Ross in *Proceedings of the American Academy of Arts and Sciences*, 1901, XXXVI, No. 21, p. 357 ff.

(b) *complicated designs* made up it may be of simple, stock patterns but constituting, by virtue of the way in which these motives are combined, original compositions, e. g., Fig. 4.

Fig. 1, from *J. H. S.* 1903, XXIII, p. 189, Fig. 8, 10.

Fig. 2, from *J. H. S.* 1903, XXIII, Pl. V, 2.

The distinction between 1a and 1b or 1c is a distinction of degree for in Cretan decorative art close studies of nature are rare. Flowers are always more or less conventionally treated. Yet between the designs of Fig. 1 and Fig. 2

Fig. 3, from *J. H. S.* 1903, XXIII, p. 197, Fig. 13.

Fig. 4, from *B. S. A.* 1902–3, IX, p. 20, Fig. 8.

there is too great a difference to admit of their being classed together. The distinction between 1b and 1c is this, that conventionalized naturalistic designs were once rendered in a more lifelike form; conventional naturalistic designs were not.

Early Minoan I.

From the first of the nine periods of Cretan bronze age pottery very little ware has been found and none has as yet been fully published. It is reported,[1] however, to be similar to the neolithic ware directly above which it lies. It is handmade and polished. Decoration, when it occurs, is obtained by

[1] See A. J. Evans, *op. cit.* p. 5 and *B. S. A.* 1903-4, X, p. 22.

incision, puncturation and in some cases, it seems, by paint. It is of the simplest linear-geometric character.

Early Minoan II.

In the second division of the early period, the same sort of primitive technique prevailed. The practice of incision continued, and there was also in use, especially at Vasiliki,[1] in the eastern end of the island, a method of decoration which consisted in firing the vase in such a way as to produce a brilliantly mottled red and black surface. The perfecting of this and of other processes of surface treatment inherited from neolithic epochs were throughout this period the potter's chief concern. A lustrous surface on a vase is obviously advantageous for practical reasons, and for aesthetic reasons also, it was probably preferred at first to painted decoration. For a polished lustrous surface affords of itself a kind of aesthetic pleasure and when, as at Vasiliki, there is the added pleasure afforded by the contrast of red and black patches of color, it is easy to see how such decoration would compete successfully with painted patterns which appeal to the instinct for rhythm and harmony of line. A typical ornament of this period is given in Fig. 5. The

Fig. 5, from *Transactions* I, Part III, Pl. XXV, G. V a.

boldness with which this pattern is applied to the vase shows a marked advance in decorative sense, though the design itself is shown by Mr. Evans[2] to have been derived directly from the incised decoration of earlier periods.

Early Minoan III.

In the third division of the early period a larger proportion of vases is painted.[3] The prevailing color of the paint is white on a slightly lustrous

[1] See table, opp. p. 50.

[2] *B. S. A.* 1902-3, IX, p. 98.

[3] The presence of incised vases in strata of this period is attributed by Mr. Evans (*B. S. A.* 1903-4, Vol. X, p. 23) to Cycladic influence. Simple incised geometric ornaments continued on stone vases throughout later periods. See, e. g., *Mon. Ant.* 1905, XIV, Part 2, cols. 473-474, Figs. 79 and 81, from the earlier palace (Middle Minoan II) of Phaistos.

brown or black ground-paint though occasionally the design-paint is brown and is applied to the clay as ground. The clay is well sifted and baked in the oven. The use of the wheel probably begins in this period, and simultaneously the fashioning of vases out of very thin clay.

The commonest principle of decoration[1] is a horizontal band of ornament about the upper part of the vase. Occasionally several zones of ornament appear. Within these zones the fundamental motive is the zigzag,

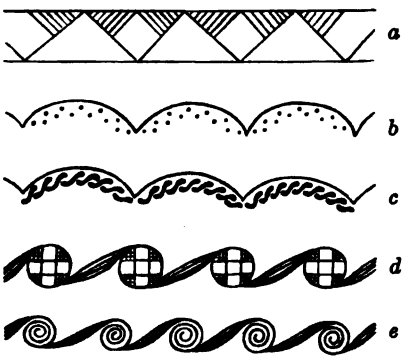

Fig. 6, from designs in *Transactions* I, Part III, Pls. XXVI–XXXIII.

an inheritance doubtless from earlier incised decoration. The simplest design in which it appears is shown in Fig. 6 *a*. But the other designs in this figure have an up and down character which suggests near relation to a zigzag. The arcs in Fig. 6 *b* and *c* are direct translations of the zigzag into curvilinear design while in *d* and *e*, if the circular device be regarded as the downward line in a zigzag, we get again a scheme which is akin to a simple zigzag line. This period, then, is marked by the transition from rectilinear to curvilinear ornament. The cause of the change was doubtless the established use of the brush, which made curvilinear design easy.[2] The quirks which enforce the arcs in Fig. 6 *c* probably owe their existence to the use of the brush by a turn of which they could easily be made. They enjoyed a long life during later periods of vase painting.[3]

[1] See E. H. Hall in *Transactions*, Vol. I, Part III, p. 198 ff.

[2] Compare Duncan Mackenzie in *Phylakopi*, p. 250.

[3] See *Argive Heraeum* II, Pl. LV, 22, for an instance of its use in the Late Minoan III period; *Athen. Mitt.* 1903, XXVIII, Pl. XVII, 4, opp. p. 144, for the geometric period; *Argive Heraeum* II, Pl. LIX, 18 a and b for "Proto-Corinthian" ware; *Vases antiques du Louvre* I, Pl. 43, E 612 for Corinthian ware; *ibid.* II, Pl. 56, E 784 for Italian-Ionian vases. It is not necessary to suppose that this pattern was adopted in every case from the preceding period. Such simple ornaments may have been arrived at independently many times. A vase of the Late Minoan I period covered with this pattern was found in a tholos tomb at Hagia Triada (*Mon. Ant.* 1905, XIV, Part 2, cols. 685-687 and Fig. 4). Sig. Paribeni, after

An important pattern which appears as a frequent[1] motive in Early Minoan III vases is the spiral. In Egypt spirals were painted on vases in predynastic periods, but in Crete up to the time of the Vth and VIth dynasties paint was not widely used as a method of decoration, and consequently spiraliform ornament, which is not easily incised, was not employed.[2] For seal-

Fig. 7, from *Transactions* I, Part III, Pls. XXVII, XXVIII, XXX and XXXII.

stones alone, the signs of individual possession and authority, did the toil of cutting out a curved pattern seem justified.

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pointing out the fact that such quirks were made by a single stroke of the brush, suggests that the pattern as it appears on the Hagia Triada vase may be a schematized form of ducks like those which occur on decorated objects of the iron age in Central Europe. This suggestion seems entirely improbable in view of its appearance in so early a stage of Cretan art as the Early Minoan III period. Equally improbable is the idea that this pattern is a degenerate cable pattern (Hogarth and Welch, *J. H. S.* 1901, XXI, p. 82 and *Transactions*, Vol. I, Part III, p. 201).

[1] Mr. Evans *op. cit.* p. 6, reports spiraliform designs in Early Minoan II vases.

[2] In Syra, where incision continued to be practised during the Early Minoan III period, the difficulty of cutting on the round was obviated by stamping the design into the clay. But this method seems not to have been known in Crete.

Among these early experiments in curved lines appear several patterns (Fig. 7), which have a slight resemblance to natural objects. Fig. 7 *a*, *b*, *c*, *d* look like leaves. They are the counterparts of patterns which appear again in the second division of the middle period.[1] In Fig. 7 *c* appears a pattern which, were it from a later period, would be called a conventionalized flower or leaf.[2] The artist's task was here to decorate a lozenge-shaped piece of clay[3] with an ornament adapted to the shape of the field. He drew two chevrons in the corners and then bent their ends around to fill the central space. Again,

a

b

c

Fig. 8, from *Transactions* I, Part III, Pls. XXVIII, XXX and XXXII.

the elongated dots of Fig. 7 *b* give the effect of leaves springing alternately from a stalk, merely because they are tipped on end.

Are these designs naturalistic? It seems improbable that the decorators of these vases ever seriously attempted to represent natural objects. Rather in experimenting with straight and curved lines in their search for balanced and harmonious decoration they happened upon designs which looked like

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[1] Compare, e. g., the upper and lower bands of ornaments on the cup in *J. H. S.* 1903 XXIII, Pl. VI, 4.

[2] See e. g. R. M. Dawkins, *J. H. S.* 1903, XXIII, p. 254. Similarly Hogarth and Welch call patterns like those in Fig. 7 degraded leaves, *J. H. S.* 1901, XXI, p. 82.

[3] This sherd is broken on the two short sides only. It may have been a part of an open-work dish like the much later lid in *B.S. A.* 1903-1904, X, p. 224, Fig. 7.

natural objects. They saw the resemblance, and it pleased them. And here we see the prophecy of imitative designs, for as soon as the artist feels the distinction between designs which represent something and those which do not, and takes pleasure in this recognition, the history of imitative design has begun. The geometric animals in Fig. 8 are further illustrations of the way in which the artist put together types of natural forms out of geometric elements.[1] The bodies of these animals, apart from their heads and tails, are equivalent to the hatched triangles and circles of purely geometric designs. On the whole, the designs of this period furnish excellent illustrations of a principle which is confirmed in the succeeding Middle Minoan I period, namely, that *naturalistic designs do not necessarily begin as a realistic reproduction of a particular natural object but as an arrangement of lines which suggest rather than picture natural forms.* Or, to put this principle in terms of the classification of Cretan pottery made above, the motive of imitation which produces designs which represent something does not operate so strongly in this early period as the instinctive desire for rhythm, harmony and balance, which leads to experiments in composition of lines and, in the end, to pure design. Accordingly, since the designs of this early period show to so slight a degree the elements of imitation, they should be assigned to the non-imitative class, and again, since they are simple and repeated on different vases, they should be assigned to the simple stock group within that class.

Middle Minoan I.

In deposits of the Early Minoan III period have been found seal stones with designs analogous to those on Egyptian "button seals" of the VI dynasty,[2] which ended in 2475 B. C.[3] The second division of the middle period will be seen to be parallel to the XII dynasty in Egypt, which dates from 2000 to 1788 B. C.[4] Between these two dates was the Middle Minoan I period. In passing to this period from the last division of the early period, we pass over no gap, but merely advance a step further in the continuous development of Cretan ceramics. The technique of the pottery of the two periods is nearly the same. The shapes of the Middle Minoan I vases in *B. S. A.* 1902-1903, IX, p. 305, Fig. 5 are scarcely different from those to which the fragments which we have just examined are to be assigned.[5] The chief change in technique is

[1] Compare Edgar in *Excavations at Phylakopi in Melos*, p. 100 and Pernier, *Mon. Ant.* 1902, XII, col. 114.

[2] See A. J. Evans, *op. cit.* p. 7.

[3] According to the later chronology which, however, leaves a margin of error of a hundred years either way from this date. See Breasted, *History of Egypt*, p. 16.

[4] With a margin of error of only four years, *ibid.* p. 22.

[5] See *Transactions* III, p. 194 ff.

the habitual use of an accessory color (red, crimson, or orange) to enhance the white design.[1]

But changes in design are more important for our purpose than changes in technique. In general, the decoration of these vases is reminiscent of the preceding period. The tailed spiral in Fig. 9 and the running spiral of Fig. 10 suggest the patterns of Fig. 6. The festoons, the quirks, and groups of lines in Fig. 11 are all motives which have appeared before (Fig. 6), while the older linear method of decoration continues unchanged on beaked jugs (*B. S. A.* 1902-3, IX, p. 305, Fig. 5). And yet, in spite of these similarities there is a marked difference in the decoration of the two periods. In the matter of syntax of design the patterns in Figs. 9–13[2] show an advance beyond Early Minoan III design. The patterns of the earlier period are applied in horizontal zones, each of which consists for the most part of a single decorative motive repeated a sufficient number of times to encircle the vase. But designs of this period are applied freely and with far fewer repetitions to the decorated field.

Fig. 9, from *B. S. A.* 1902–3, IX, p. 305, Fig. 4.

Fig. 10, from *B. S. A.* 1902–3, IX, p. 305, Fig. 5.

In Figs. 11 and 13 all traces of horizontal zones of ornament have disappeared. In those vases where decoration is still applied in zones (Fig. 12), the designs are more elaborate in character, a fact to be explained in part by the possibility of contrast and variety afforded by the use of a second color. This increased elaboration of design is the most distinctive difference in kind between the ornament of this and that of the preceding period. The decoration of Fig. 12 is a careful attempt to fill a band of ornament with graceful and harmonious lines. Though the curves springing from the oblique lines in this design bear some resemblance to leaves, the motive of imitation hardly enters in here. The shape of the field to be decorated and the artistic arrangement of lines within that field were quite evidently uppermost in the mind of the decorator. This design, therefore, should be assigned to the non-imitative class and because of its complex character to the second division of that class.

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[1] Mr. Evans noted the beginnings of polychrome painting in the preceding Early Minoan III period, *op. cit.* p. 6.

[2] This vase because of its sturdy shape I have assigned to this Middle Minoan I class, though its decoration seems somewhat later.

Lastly,[1] there is to be noted in the designs of this period an increase in naturalism. The tendrils in Fig. 12 and the leaflike design in Fig. 13 resemble nature more closely than did any design in the Early Minoan III

Fig. 12, from *B. S. A.* 1902–3, IX, p. 303, Fig. 2.

Fig. 11, from *B. S. A.* 1902–3, IX, p. 305, Fig. 5.

Fig. 13, from *Transactions* I, Part III, Pl. XXV, A, Ph. II a.

period, although now, as then, naturalistic patterns are formed from rectilinear and curvilinear motives.

Middle Minoan II.

The pottery of the succeeding division of the middle period is well known. It has long been termed "Kamares ware" after the local name of the cave on Mt. Ida, where it was first found.[2] It has attracted the attention of scholars because of the quantity in which it has appeared (see table opp. p. 50) and because of the delicacy of its shapes, the richness of its color, and the harmony of its designs. In contrast with the thick clay and sturdy shapes of the preceding period we note here a clay as light and thin as that of a modern Haviland teacup. The cups of this "eggshell ware" show a variety of graceful shapes, which attests the high degree of technical skill to which the potter has attained (see, e. g., *J. H. S.*, 1903, XXIII, Pl. V). The ornamentation consists in some cases of relief work but more commonly of polychrome painted patterns applied to a dark body paint. The chief colors are white, orange, crimson, red, and yellow. Such perfection of technique implies a civilization far removed from

[1] A more illuminating example of complex non-imitative Middle Minoan I design is shown in Pl. I of *B. S. A.* 1904–1905, XI, which has been issued since this paper went to press.

[2] See *Parnassos*, 1886, X, p. 339 ff. and *Röm. Mitt.* IX, p. 100, Mr. Dawkins has pointed out that this name cannot properly be used of both technique and period. See *B. S. A.* 1903–4, X, p. 192.

Fig. 14, from *J. H. S.* 1901, XXI, Pl. VII; *ibid.* 1903, XXIII, Pls. VI and VII; *B. S. A.* 1902–3, IX, p. 305, Fig. 4; and *Mon. Ant.* 1895, VI, Pl. XI.

primitive life. Similarly the designs of this ware imply an æsthetic taste far removed from primitive art. Occasionally, still, the ornament on these vases is applied in zones (Fig. 14 *j*), though more commonly in an undivided design.

The classes into which the ornament of this period falls are three: the two kinds of non-imitative designs—simple and complicated—which were found in the preceding period and the conventional naturalistic class, the tendencies toward which were seen in both the early Minoan III and the Middle Minoan I periods. Examples of this kind of design are shown in Fig. 14. Fig. 14 *h* is an excellent example of the way in which flowerlike designs were made up of familiar geometric motives. The stem is a zigzag line, while the petals are represented by curls and the center by a dot. In later Mycenaean design this flower would be called degenerate or stylized. Here it seems to be a new invention. In Fig. 14 *i* another circular device of a dot surrounded by stamenlike rays is shown. In Fig. 14 *j* the decorative border design of the uppermost and lowest zones seems to be a stiff representation of buds or fruit and stems, though this design is quite possibly a descendant of the running designs which characterize the Early Minoan III period. Among the conventional representations of leaves the designs in Fig. 14, *a–e*, should be noted.

This group of designs confirms the principle stated on page 12 that naturalistic designs do not begin as realistic reproductions of natural objects, but compared with the designs of the preceding period, they show decided progress toward the achievement of a naturalistic style. It may be that the beginnings of this style should be assigned to this period. The decoration of the jar in Pl. I, Fig. 2, is certainly very similar to the design of Fig. 1.[1] However that may be, the conventional naturalistic motives of this period must be regarded as representing a stage of growth intermediate between the first steps toward naturalism in the Early Minoan III period and the fully developed naturalistic style of the Middle Minoan III period.

Non-imitative designs of this period may be divided as before into two classes according to their complexity. Among the simple stock designs of this period are the following: quirks and dots, Figs. 15, 17 and 19; festoons, Fig. 16; spirals; the linear geometric ornaments of Fig. 17; the crescents in *B. S. A.* 1903-1904, X, p. 15, Fig. 4 *a*, *ibid.* p. 16, Fig. 6, *a* and *c* and *Mon. Ant.* 1905, XIV, Part 2, Pl. XLIII, 2; concentric circles, Fig. 18; certain designs appropriate to weaving like those in Figs. 20 and 21; the waved lines and comb pattern in *B. S. A.* 1903-4, X, p. 16, Fig. 5, 1; various forms of

[1] The lily in *J. H. S.* 1901, XXI, Pl. VI b, seems to be transitional between the Middle Minoan II and Middle Minoan III style. Its orange paint connects it with Middle Minoan II vases while the realistic rendering of the flower is after the Middle Minoan III style.

crosses and rosettes, Fig. 19 and *Mon. Ant.* 1895, VI, Pl. XI, 27; *B. S. A.* 1903–1904, X, p. 17, Fig. 6, m and b; *Mon. Ant.* 1905, XIV, Part 2, Pl. XLII, 1; *J. H. S.* 1903, XXIII, Pl. VI, 1, and the hooked ornaments of Fig. 22. Of many

Fig. 15, from *Transactions* I, Part III, Pl. XXV.

Fig. 16, from *B. S. A.* 1903–4, XI, p. 15, Fig. 4.

of these patterns nothing more need be said than that they occur. In case of others further comment is in place.

Fig. 17, from *Mon. Ant.* 1895, VI, Pl. IX.

Fig. 18, from *Mon. Ant.* 1895, VI, Pl. IX.

The "comb pattern" in *B. S. A.* 1903-4, X, p. 16, Fig. 5, 1, occurs on Cretan neolithic ware, *J. H. S.* 1903, XXIII, Pl. IV, 24 and 29.

Fig. 19, from *Mon. Ant.* 1895, VI, Pl. IX.

Fig. 20, from *Mon. Ant.* 1895, VI, Pl. XI.

The crescents in *B. S. A.* 1903-4, X, p. 15, which reappear in frescoes of this period, are a motive which is characteristic of Samian ware. Boehlau[1] expressed his belief that this motive was known in Mycenaean art and Mr.

[1] *Aus Ionischen und Italischen Nekropolen*, p. 65.

Mackenzie and Mr. Edgar[1] recognized that this belief was confirmed by the crescents found on vases from Crete and Melos. The crescent has also been found in the late Minoan I period.

Again the cruciform ornaments[2] cited are to be connected with both later

Fig. 21, from *Mon. Ant.* 1895, VI, Pl. X.

Fig. 22, from *Mon. Ant.* XIV, Part II, Pl. XLII, 3.

Mycenaean and Samian design. On Samian vases the cross is commonly the central ornament of a latticed pattern similar to that in Fig. 21, a combination which, though not actually found in Middle Minoan II ware, is yet entirely in keeping with its character. Identically the same latticed pattern filled with

Fig. 23, from *J. H. S.* 1901, XXI, Pl. VI.

Fig. 24, from *B. S. A.* 1903–4, X, p. 16, Fig. 5.

crosses appears in Attic red-figured vases, especially as an ornament on cloth[3] where Ionic motives might well be expected.

The distinction between the simple and complicated classes of non-imitative designs is sometimes slight and cannot always be made with certainty. Simple patterns such as spirals and quirks are used so much that they belong to the artist's stock repertoire of patterns, while the complicated designs are rather the original composition of the artist. A pattern so original as that in Fig. 4 which belongs to this period would certainly not be often copied.

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[1] *J. H. S.* 1903, XXIII, p. 179 note and *Phylakopi*, p. 122.

[2] Compare also the cruciform patterns on "Kamares" fragments from Phylakopi, *Phylakopi*, p. 149, Figs. 127–129, and those in *J. H. S.* 1901, XXI, p. 94, Fig. 28.

[3] Furtwängler-Reichhold, *Griechische Vasenmalerei*, Pl. XX. Compare the embroidred cloth represented in the Hagia Triada fresco in *Mon. Ant.* 1903, XIII, Part 1, Pl. 10.

Other designs which look original are shown in Figs. 23 and 24. But in some cases it is impossible to say whether a pattern was common or not. Again the method of combining simple stock motives may be so simple that it is difficult to say to which class the resulting design should be assigned. A row of dots would be counted as a simple design. But the decoration made up of dots and lines in *J. H. S.* 1901, XXI, Pl. VII, 9, might well be regarded as a complex design.

Some of the finest designs of this period combine conventional naturalistic with non-imitative ornament, as for example Fig. 25. With the exception of

Fig. 25, from *B. S. A.* 1902–3, IX, p. 120, Fig. 75.

the groups of three leaves which spring in pairs from the four corners of the design, this ornament is quite similar to that in Fig. 4 which was taken as typical of the complicated designs of the non-imitative class. But from the addition of these leaves a mixed design results. Similar groups of leaves spring from a circular motive in Fig. 14 *e*. They suggest such combinations of leaves and spirals as that in Furtwängler and Löschcke, *Myk. Thon.* Pl. VI, 31;[1] Boehlau, *op. cit.* p. 54, Fig. 22; p. 55, Fig. 25 and p. 81, Fig. 36; *Naukratis* I, Pl. VI, 3, II, Pl. VII, 5 and *Tanis* II, Pl. XXVIII, 4. Here again Middle Minoan vases seem to have furnished prototypes for the decoration both of Mycenaean (Late Minoan) vases and of the vases of Samos, Naukratis, and Daphnae. The artistic merit of the decoration of this period varies greatly. Some of the mixed designs like Fig. 25 and *J. H. S.* 1903, XXIII, Pl. V, 1 and Pl. VI, 3, rival in richness and harmony the designs of any later period of Cretan bronze age art. In other cases (Figs. 18, 26 and 27) the designs seem

[1] Compare the statements of Hogarth and Welch, *J. H. S.* 1901, XXI, p. 97, that "Kamares" patterns do not survive in the Mycenaean style. More analogies between the designs of these two periods are noted later.

to have been less successfully constructed and a kind of distorted, fantastic ornament results.

If, in our attempt to understand the designs of this period, we turn for light to other decorated objects than vases, we are disappointed to find the material at hand scanty. Middle Minoan frescoes have been found in small quantities both at Knossos and Phaistos,[1] but they have added little to our knowledge of the decorative art of this period. Another art known to have flourished in this period is metalwork, some of the characteristics of which are reflected in vases. It is well known that the thin clay of Middle Minoan II cups, their straplike handles and their knobs made to look like metal rivets were affected by the potter with the purpose of making his ware resemble the more costly products of the goldsmith's or silversmith's art.[2] Mr. Evans thinks that in the matter of design also, the potter was indebted to the worker

Fig. 26, from *Mon. Ant.* 1895, VI, Pl. IX, 1.

Fig. 27, from *Mon. Ant.* 1895, VI, Pl. IX.

in metal. The designs in *B. S. A.* 1902-3, IX, Pl, II, 1 and in Fig. 4 he regards as derived from metalwork.[3] But this is a matter of probable surmise, not certainty, since so few examples of the metal decorations of this period have been preserved to us.

Of another art, however, which flourished in this period, traces have been found, and these traces we owe, as we owe the relics of the ceramic art, to the indestructible character of clay. Among the Middle Minoan II vases found beneath the "olive press rooms" at Knossos were found clay seal impressions. Two of these are reproduced in *B. S. A.* 1902-3, IX, pp. 20 and 21, Figs. 9 and 10. If we examine the designs of these two seal impressions, we observe elements not found in vases of this period. First, in Fig. 9, the gem cutter's

[1] See *B. S. A.* 1901-1902, VIII, p. 24, *J. R. I. B. A.* 1902-3, p. 109, Figs. 1 and 2, and *Mon. Ant.* 1905, XIV, Part 2, col. 403.

[2] Compare Hogarth, *B. S. A* 1899-1900. VI, pp. 101 and 102; *ibid.* 1902-1903, IX, p. 314, and *Mon. Ant.* 1903, XII, col. 113.

[3] See *B. S. A.* 1902-3, IX, p. 20.

attempt to suggest by a wild goat and plant a scene from the outdoor world attracts attention. Nothing so naturalistic or so original has appeared on vases. Equally interesting is the design of the other seal. For here amid spirals, scrolls, quatrefoil rosettes and other decorative motives familiar to us from vases of this period appears a conventional flower which resembles the papyrus blossoms known in contemporary Egyptian art,[1] and in later stages of Cretan art.[2] Again, among the clay sealings found in the remains of a Middle Minoan II building to the southeast of the Knossos palace was one (*B. S. A.* 1901-2, VIII, p. 106, Fig. 63) which showed a lily design derived from a XIIth dynasty scarab and two others (*loc. cit.* p. 107, Figs. 64 and 65) which bore the design of the sacred double axe. Both of these motives appear in the following period on vases. Two conclusions may be drawn: first, that the gem cutter's art was subject to Egyptian influence in this period,[3] and second, that the seals of this period anticipate the motives of later vases. The designs of seal stones seem in some cases to have furnished inspiration to the vase painters of this period. The decoration of the jar in Pl. I, Fig. 1, is obviously adapted from the gem cutter's art as Sig. Pernier points out (*Mon. Ant.* 1905, XIV, Part 2, col. 459). The circle which confines the main part of the decoration is equivalent to the field of a seal while the spiraliform pattern within is such as is commonly used for decorating seals.

Middle Minoan III.

We come now to the Middle Minoan III period, the era of the beginning of the new palace at Knossos. At the first glance over the material available for a study of the design of this period we observe that, contrary to what has before been the case, painted vases are less numerous than other decorated objects. Our knowledge of the character and tendencies of the art of this period would be far less complete than it is, were it not for the lucky circumstance which preserved the collection of small faience objects in the "Temple Repositories" of the Knossos palace. These well-known repositories included the appurtenances of a shrine of the snake goddess, conspicuous among which were the figures of the goddess herself and of her votaries. There were also found a number of votive robes and a series of small models of shells, fruit and flowers

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[1] Compare, e. g., the papyrus blossoms from a Beni Hasan wall painting in Borchardt, *Die ägyptische Pflanzensäule*, p. 27, Fig. 46, and the later Ptolemaic treatment of the flower in *ibid.* p. 42, Fig. 68.

[2] See Pl. II.

[3] For further evidence of the influence of Egyptian XII the dynasty scarabs on seals of this period see A. J. Evans, *Cretan Pictographs*, p. 58, Fig. 49, and Pernier in *Mon. Ant.* 1905, XIV, Part 2, col. 446.

which had served as offerings or as ornaments of the shrine.[1] Since these faience objects are in so many cases painted with patterns similar to those found on vases and since their decoration involves no principle foreign to vase-painting, it will be well to consider their designs along with those of the painted vases of the period, as soon as we shall have reviewed the general characteristics of Middle Minoan III ware.

Vases of this period may frequently be recognized by their dull purple slip and powdery white paint.[2] They differ, therefore, from the ware of the preceding period in the loss of the fine black glaze ground and the decline of polychrome decoration. From the late Minoan I vases, on the other hand, they are distinguished by the use of white as the usual color for the main design instead of for mere accessories of the decoration.

The designs are applied to the field to be decorated with absolute freedom (see, e. g., Fig. 1). This free treatment of the design goes hand in hand with the achievement of a purely naturalistic style.

If we follow the order of the classification made on page 6, we shall begin our study of Middle Minoan III ornament with designs of the highly naturalistic style of which Fig. 1 furnishes a good example. It marks the acme of naturalism in Cretan vase painting. Equally free and lifelike are the grass pattern in *B. S. A.* 1902–3, IX, p. 50, Fig. 26 d, and the crocuses in *ibid.* 1903–4,

Fig. 28, from *B. S. A.* 1902–3, IX, p. 82, Fig. 58.

X, p. 17, Fig. 6 b, and in Fig. 28, where they serve as decoration of the votive garments of the snake goddess. Most of the ornaments of the shrine bear witness to the same love of nature. Among them are models in the round of fruit, flowers, flying fish, and shells. Shells seem to have been a favorite decoration. Hundreds of real shells of the varieties still known in the island were recovered from this shrine alone. The shell appears also on seal stones (*B. S. A.* 1902–3, IX, p. 56, Fig. 34) and as an ornament on a faience bowl (*ibid.* p. 73, Fig. 51).

Now it is noteworthy that many of the faience objects from this shrine are to be closely connected with Egyptian faience work. Mr. Evans (*B. S. A.* 1902–3, IX, p. 63) has pointed out the following affinities: (1) the glaze on these ornaments is similar to that on Egyptian porcelain; (2) the faience

[1] See *B. S. A.* 1902-1903, IX, pp. 38-94.

[2] See A. J. Evans, *B. S. A.* 1903-4, X, p. 8.

beads found in the temple repositories are like the Egyptian beads of the XIIth and XIIIth dynasties in Egypt, except for a slightly smaller perforation; (3) the signs found on the pieces for inlay correspond to those used by Egyptian inlayers,[1] and (4) Egyptian designs are copied in Cretan art. This evidence proves the existence of Egyptian influence in Crete during the Middle Minoan III period.

Of the two types of flowers, the crocus and the lily, which are most characteristic of the designs of this period, one, the lily, is known in XIIth dynasty Egyptian art,[2] while the other, the crocus, is not unlike some representations of the Egyptian lotus.[3] But in Egyptian art these flowers belong commonly to large wall paintings, the purpose of which was to attest the deeds of rulers. The desire for decorative effect was therefore subservient to the desire for historical records. The flowers which are introduced into such paintings represent commonly the background for fowling scenes or the like. Though drawn with the greatest fidelity to nature, they are crowded in stiff rows or groups into their place in the larger scene. Now when Cretan artists came to borrow types of flowers from Egypt they applied them to their vases with the greatest freedom and with a sense for decorative effect, trained by long practice in non-imitative and conventional naturalistic designs. Cretan flower types are for this reason more difficult to assign to a definite botanical species than Egyptian types, though they give a general effect which is more realistic. A case in point is Fig. 29 which, as Mr. Evans has pointed out,[4] is an adaptation of the lotus clumps of Egyptian art.[5] Here the method of arrang-

Fig. 29, from *B. S. A.* 1902–3, IX, p. 82, Fig. 58.

ing the flowers is the same as in Egyptian art, yet every trace of Egyptian stiffness is gone. Generally, however, methods of combining and arranging flowers were not borrowed from Egypt.[6] On another votive robe from the snake goddess shrine (*B. S. A.* 1902-1903, IX, p. 82, Fig. 58) detached blossoms

[1] But these Egyptian inlayers lived in the time of either the early dynasties or of the new empire.

[2] See Borchardt, *Die ägyptische Pflanzensäule*, p. 18, Fig. 30, and Petrie, *Hawara, Biahmu and Arsinoe*, Pl. 27, 5 and 6.

[3] See Beni Hasan I, Pl. XII, lower register.

[4] *B. S. A.* 1902-3, IX, p. 83.

[5] See e. g. Petrie, *Decorative Art*, p. 56, Fig. 128.

[6] See below, p. 28.

are painted in rows, while on the cup in *B. S. A.* 1903-1904, X, p. 17, Fig. 6 b, they are scattered loosely.[1]

Conventional naturalistic designs are not numerous in this period. Fig. 30 shows one instance of this kind—a fern pattern—which is obviously derived

Fig. 30, from *J. H. S.* 1903, XXIII, p. 178, Fig. 5.

from such patterns as those in Fig. 14 *b* and *c*. Other instances of conventional representations of natural objects occur among the faience ornaments of the temple repositories. One is the representation of rocks or of the

Fig. 31, from *B. S. A.* 1902–3, IX, p. 67, Fig. 44.

natural surface of the ground which appears among the models of marine life in *B. S. A.* 1902-1903, IX, p. 67, Fig. 46. With it should be associated a pattern to which the name rock-work pattern has been given. It is used in marine scenes[2] and it frequently defines the field of ornament in later designs

[1] *Cf.* the restoration of the lily fresco in *Phylakopi*, p. 76, Fig. 64. The plaster fragment from Thera in Perrot and Chipiez, *Histoire de l'art*, VI, p. 537, Fig. 211, and the inlaid dagger from Mycenae in *ibid.* Pl. XIX, opp. p. 784.

[2] See R. C. Bosanquet, *Phylakopi*, p. 70 and A. J. Evans, *The Prehistoric Tombs of Knossos*, p. 156.

on vases.[1] Another is the scale pattern used in the faience relief of a wild goat (*B. S. A.* 1902-1903, IX, Pl. III) for the same purpose of representing the surface of the ground. It recurs in later periods (see below, p. 33), but with no imitative purpose. The third conventional naturalistic ornament from the shrine is the faience pendant in Fig. 31. The two flowers at the sides of this ornament with curving petals and solid central lobe resemble the conventional Egyptian type of lily. But here there is no more naturalistic treatment of the motive than is found in Egypt. The manner in which a third lobe is added in the center of the ornament to complete the symmetry of the design is worth noticing. It makes the central part of the pendant to consist of which we shall find as a separate ornament on both vases and frescoes of later periods.[2]

Lastly, among the imitative designs of this period should be mentioned two sacral patterns, the shield and the double axe. The former, which ornaments the rim of a faience bowl of this period (*B. S. A.* 1902-1903, IX, p. 72, Fig. 49) is a decorative motive which appears frequently in later stages of Cretan art.[3]

Turning now to the non-imitative designs of this period we note first of all the quirk (*B. S. A.* 1902-1903, IX, p. 75, Fig. 54 a and b), the persistent appearance of which in all these early periods of Cretan ornament is a strong argument for continuous native development. On the upper and lower bands of ornament from the jug in Fig. 32—which may, however, be a Melian

Fig. 32, from *B. S. A.* 1902–3, IX, p. 50, Fig. 26.

importation—and in *J. H. S.* 1903, XXIII, p. 189, Fig. 8, Nos. 1, 2 and 3, appear spirals and a pattern called by Mr. Mackenzie (*ibid.* pp. 160 and 181) the ripple motive and derived by him from the rippled surface of neolithic ware. This derivation seems less probable now that our knowledge of Early and Middle Minoan pottery is more extensive, for the ripple motive does not appear to have been in use during these early periods.

Among the more complex patterns of the non-imitative class are two

[1] See Fig. 39.

[2] See *J. R. I. B. A.* 1902-3, p. 130, Fig. 81, *Mykenische Vasen*, Pl. I, 1, and below, p. 39.

[3] See Hastings, A. J. A. 1905, IX, p. 285.

designs from the votive robes of the snake goddess (Fig. 33 and *B. S. A.* 1902-1903, p. 77, Fig. 56b). The latter linear design is similar to a latticed pattern on a fresco from Knossos (*J. R. I. B. A.* 1902-1903, p. 129, No. 76) and to the latticed decoration of the preceding period. The pattern on the votive belt in Fig. 33 is also reminiscent of Middle Minoan II design.

The class of mixed designs is represented in this period by the pattern in Fig. 34. Except for the added grasses this pattern too is typical of the design of the preceding period (see Fig. 4 and *Mon. Ant.* 1895, VI, Pl. X, 27).[1]

Fig. 33, from *B. S. A.* 1902–3, IX, p. 82, Fig. 58.

Fig. 34, from *B. S. A.* 1903–4, X, p. 9, Fig. 2.

Late Minoan I.

Large quantities of pottery of the succeeding Late Minoan I period have been brought into the museum at Herakleion during the last six years, but only a small number of these vases has been published (see table opp. p. 50). The publication of the excavations at Gournia, which have yielded more of this pottery than any other site, is shortly to appear.

In technique this ware differs widely from the preceding. Some vases are still painted in the fashion prevalent at the end of the Middle Minoan III period, that is, with white designs on a dark paint ground, but more numerous are vases painted in a fully developed Mycenaean technique of dark glaze paint design on the light ground of the clay. Characteristic is a combination of the two techniques of light-on-dark and dark-on-light designs upon the same vase (*J. H. S.* 1902, XXII, Pl. XII, 2).[2] Characteristic also of this period is the use of superadded white. The eyes of spirals are commonly ornamented with a circle of white dots, and bands of dark paint are often used as the background for rows of dots or leaf-like splashes of white (*J. H. S.* 1903, XXIII, p. 106, Fig. 7, and forthcoming Gournia publication). This practice must be regarded as the continuation of Middle Minoan II technique.

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[1] Mr. Evans notes that this design is analogous to Egyptian Middle Empire decoration.

[2] Combinations of the two techniques are known as early as the Middle Minoan II period. See *J. H. S.* 1903, XXIII, p. 177, and Pl. VI, 4.

Pure naturalistic designs are numerous in this period. Among those which have appeared in earlier epochs are the grass patterns of Fig. 35,[1] which may be compared with Pl. II, Fig. 2 and *B. S. A.* 1902-1903, IX, p. 50, Fig. 26 d; the lily of *J. H. S.* 1902, XXII, Pl. XII, 3, which may be compared with Fig. 1; and the crocus, which is a common ornament both on Gournia vases of this period, and in Middle Minoan III design. Two other survivals of earlier decoration are to be seen in the marguerites of the Gournia vases and in such foliate sprays as those which decorate the neck of the jug in Fig. 36.[2] The

Fig. 35, from *J. H. S.* 1903, XXIII, p. 253, Fig. 17.

Fig. 36, from *Mon. Ant.* 1902, XII, Pl. VIII.

marguerites must be regarded as the descendant of the stiff rosettes of Middle Minoan II pottery, Fig. 14 *f, j, k,* and the foliate sprays of the Early Minoan III ornaments in Fig. 7 *b*.

Pure naturalistic patterns which have not occurred before are: (1) the tendril pattern, Fig. 37; (2) the ivy or heartshaped leaf, Fig. 38; (3) the nymphæa, *J. H. S.* 1902, XXII, Pl. XII, 2, and marine designs, including (4) the octopus; (5) the nautilus; (6) the Triton shell, and (7) seaweed. The first two of this naturalistic group with their waving stalks and alternating leaves are examples of the type of design which Riegl regarded as so important a contribution to early ornament (*Stilfragen*, p. 120 ff, Figs. 50 and 52). The fragment from Thera used by him as an illustration dates from the period under discussion. These graceful and decorative designs, which stand in marked contrast, indeed, to the art of Egypt and Assyria, are in accord with

[1] Compare contemporary Thera and Melos vases, Perrot and Chipiez, *Histoire de l'art*, p. 909, Fig. 159, and *Phylakopi*, Pl. XIX, 9 and 10, and Pl. XXVII, 2.

[2] Compare the foliate sprays on Thera vases, Perrot and Chipiez, *op. cit.* VI, p. 908, Fig. 457, and on the Hagia Triada fresco in *Mon. Ant.* XIII, Pl. 10.

the spirit of earlier Cretan art. As far back as the Early Minoan III period, Cretan artists showed an interest in curvilinear design and an unerring sense of decorative effect. Thus this tendril pattern may well be compared with the designs in *Transactions* 1905, Vol. I, Part III, Pl. XXVII, 11 and Pl. XXXIII, 5. The ivy leaf of Fig. 38 is nearer to nature than most of the naturalistic designs of Cretan art, as may be seen by comparing it with the illustration on page 49, which is made from a photograph of a natural ivy, growing today in Greece.

The nymphæa blossoms which predominate in the central band of decoration in the Zakro pit jar (*J. H. S.* 1902, XXII, Pl. XII, 2) have been shown by Mr. Hogarth (*ibid.* pp. 336 and 337) to be an adaptation by the Cretan artists of an Egyptian motive. The Egyptian flower is stiff and for-

Fig. 37, from *J. H. S.* 1903, XXIII, p. 249, Fig. 3.

Fig. 38, from *J. H. S.* 1903, XXIII, p. 252, Fig. 15.

mal, the Cretan graceful and free, though, as Mr. Hogarth points out, the Egyptian type is nearer to an actual form in nature than are the flowing blossoms on the Cretan vase. The nymphæa thus confirms the story told by the lily type of ornament, viz.: that Egypt furnished formal types which the Cretan artists made over into a more naturalistic style of their own.[1]

The Middle Minoan III ornaments from the shrine of the snake-goddess at Knossos have already borne witness to the interest of the Cretan artist in marine life. It is not surprising, accordingly, that in this period pictures of sea life should begin to appear on vases. On Gournia pottery of this period appear the octopus,[2] the nautilus, fronds of seaweed and the conventional pattern called by Mr. Bosanquet sea anemones,[3] while on a vase from Hagia

[1] Riegl, who studied Mycenaean design before much pottery prior to the late Minoan I period was known, maintained (*op. cit.* p. 45, and *passim*) that the "Mycenaean" genius consisted chiefly in this ability to convert conventional into lifelike designs. Though at the end of his discussion (p. 134) he admitted some few patterns, chiefly marine designs, which were native to "Mycenaean" art. This list must now be materially increased. The originality of Cretan artists, moreover, has been established beyond doubt by such works of art as the Harvester's Vase (*Mon. Ant.* XIII, Pl. I-III) and the faience relief of a wild goat and young from Knossos (*B. S. A.* 1902-1903, IX, Pl. III.)

[2] *Transactions*, Vol. I, No. I, p. 43, Fig. 21, and forthcoming publication.

[3] *J. H. S.* 1904, XXIV, p. 319.

Triada (*Mon. Ant.* 1903, XIII, col. 65, Fig. 52) appear Triton shells against a background of a scale pattern to be considered later.[1]

A thorough and appreciative study of Cretan marine designs has recently been published by Mr. Bosanquet (*J. H. S.* 1904, XXIV, pp. 320-322). It remains here merely to state the fact of the appearance of this class of vases in this period and to point out, for the sake of comparison with later conventionalized marine motives, the lifelike form in which they here occur. An exception to this naturalistic rendering is the decoration of the jug in Fig. 39.[2] The streamers which curve about between the two bands of rock-work pattern

Fig. 39, from *B. S. A.* 1902-3, X, p. 285, Fig. 5.

are generally regarded as fronds of algae. But the artist's desire is not so much to represent sea life as to arrange graceful and harmonious combinations of lines, as may be seen by the insertion of the stop-gap ornament below the spout. The design is accordingly conventional naturalistic.

Another ornament of this class is the leaf pattern in *J. H. S.* XXIII, p. 253, Fig. 16, which is a common pattern in the succeeding period (see, e. g., Pl. III).

On the nymphæa vase from the Zakro pit is a heartshaped leaf conventionally drawn which recalls: (1) Fig. 7 *c* of the Early Minoan III period; (2) the faience pendant of the Middle Minoan III period (Fig. 31); (3) the naturalistic

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[1] The Zakro filler with marine designs in *J. H. S.* 1902, XXII, Pl. XII, 1, I have not included in this period since in general the Zakro houses from which it comes are later than the pits. But too much emphasis cannot be laid on the fact that the divisions between these periods are more or less arbitrary and that the different styles characterizing them overlap. Thus the Zakro bowls with tendril pattern painted in white (Fig. 37) are from the very beginning of this period as possibly the Zakro filler in question may be from the end.

[2] Exactly the same design recurs in Ἐφ. Ἀρχ. 1889, Pl. 7, 19.

ivy leaf of Fig. 38, and (4) the ornament in Fig. 36. No better illustration could be found of the varied sources of Cretan art, than is afforded by a comparison of these patterns. The ivy leaf of Fig. 38 we saw to be derived from nature.[1] On the contrary the type shown in Fig. 7 *c* owed its origin to curved lines drawn with reference to the shape of the field to be decorated.[2] Midway between these two extremes stands the slightly conventional leaf under discussion (the lobes of this leaf are represented by spirals), the highly conventional design of Fig. 31, in which the ivy or heartshaped motive is, as it were, a by-product, and the pattern in Fig. 36. The ornament in the center of the design in Fig. 36 is equivalent to the central lobe of the conventional type of lily (see Fig. 52). Its appearance within the ivy leaf may have reference to one or both of the following facts: the two recurving ends of the ivy leaf suggest the two leaves between which a conventional flower is commonly set (Fig. 51) and its shape is well adapted to the shape of the central space of the ivy leaf. The same facts will account for the outer flowerlike appendage, since it rounds out the ornament in this direction and since flowers are sometimes set between leaves which curve in toward the flower instead of away from it as in nature. (See, e. g., the Egyptian ornament in Fig. 40 and the small flowers in *J. H. S.* 1904, XXIV, Pl. XIII.[3])

Fig. 40, from the *Cairo Museum Catalog*, No. 24071.

Another pattern foretold by the collection of faience objects from the temple repositories of Knossos is the "rock-work" pattern which begins in this period[4] to be used as a means of defining the edges of a zone of ornament. The only case of it I can cite in this period (Fig. 39) may not seem to justify its name, but on an unpublished vase from Gournia, flowers spring from between the lobes of this pattern. It should be connected with the more elaborate honeycombed rock-work of marine designs. Both these conventional representations are combined with perfectly naturalistic ornaments.

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[1] Compare *Phylakopi*, Pl. XVII, 32 and Pl. XIX, 1.

[2] Compare *Mon. Ant.* 1905, XIV, Part 2, col. 487, Figs. 91 and 92.

[3] Mr. Edgar's explanation of this pattern *Phylakopi*, p. 131, that it is derived from the type of pattern in Schliemann, *Tiryns*, Pl. V, seems to me improbable in view of the widespread use of the ivy leaf or heartshaped motive in Mycenaean as in all design.

[4] See below, p. 39.

Finally, in taking leave of the imitative designs of this period we note on Gournia vases the reappearance of the double axe motive.

Some of the non-imitative designs of this period are of the simplest rectilinear and curvilinear geometric type. The ornament on the beaked jug in Fig. 41, which recurs on Gournia vases, is one which it would not be surprising to find

Fig. 41, from *Mon. Ant.* 1905, XIV, col. 687, Fig. 5.

Fig. 42, from *J. H. S.* 1902, XXII, Pl. XII.

on neolithic pottery. Similarly there is to be noted the frequent use of wave lines (Fig. 42). The waved lines associated with dots in Fig. 45 Mr. Dawkins connects[1] with Middle Minoan decorations. A decoration composed of circles on a dotted background which is frequent on Gournia vases is perhaps

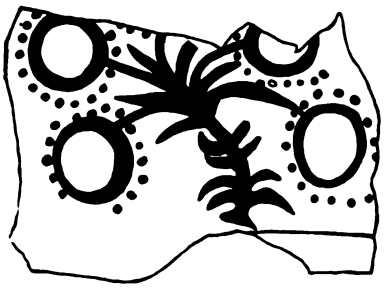

Fig. 43, from *J. H. S.* 1903, XXIII, p. 196, Fig. 12.

Fig. 44, from *J. H. S.* 1903, XXIII, p. 251, Fig. 14.

a progenitor of the flower in Fig. 43. If so, here is further evidence for the slight distinction felt between naturalistic and conventional patterns. The quirk remains in use during this period, both as a border motive and as a means of ornamenting the entire surface of a vase. The spirals of this period

[1] *J. H. S.* 1903, XXIII, p. 254.

frequently occur in this form; and their centers are further ornamented with white dots. A shortened form of crescent is a stop-gap ornament used in this period (Fig. 44), though possibly it may have been intended for a representation of the stamens of a flower, since it is used to top the stalks in Figs. 38 and 52 *l*. Here again we have witness of the ingenuity and skill of the Cretan potter in obtaining naturalistic effects out of unpromising material. The whorl used as a background for the lilies in Fig. 42 and as the main scheme of ornament in Fig. 45 is characteristic, both of this and of the succeeding Late Minoan II period. The ripple pattern (see Fig. 32) is as frequent in this as in the Middle Minoan III period.

Fig. 45, from *J. H S.* 1903, XXIII, p. 253, Fig. 18.

By far the most interesting of the non-imitative patterns of this period is the scale pattern in Fig. 46, which recurs on a Gournia *bügelkanne* of this period. This pattern, described by Perrot and Chipiez (*op. cit.* VI, 1, p. 542) as

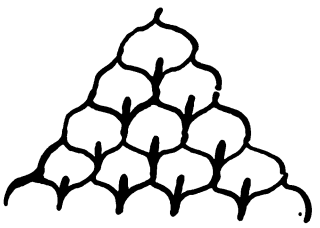

Fig. 46. Pattern used for background in the marine design in *Mon. Ant.* 1903, XII, Part I, col. 65, Fig. 52.

a lozenge-shaped ornament with curved sides, is one of the most characteristic patterns of Mycenaean art. Mr. Edgar (see *Phylakopi*, p. 114 and Pl. XVI, 13, and Pl. XVIII, 2, 7, 14, etc.) thought it began at Phylakopi as a border pattern of trefoil curves, detached or running, but there should not be left out of account the facts: (1) that in Egypt a scale pattern was used to indicate

the plumage of birds as early as the first dynasty;[1] (2) that this pattern acquired central stalks (Fig. 47) as early as the XIIth dynasty,[2] and (3) that this Egyptian type was known in Crete, for it appears on unpublished fragments from the Knossos houses and in the preceding period as a representation of the natural ground in the faience plaque of the wild goat.[3] The change to the more graceful trefoil shape of scale must be ascribed to the artistic taste of Cretan potters. Bits of ivory and paste of this shape have been found both at Knossos and at Spata.[4] Some of the pieces from Knossos were pierced centrally, probably for the insertion of an ornament corresponding to that which generally characterizes the pattern on vases. It is evident that the trefoil curves of these scales were advantageous for inlay, although scales of the simpler Egyptian type were also used for this purpose

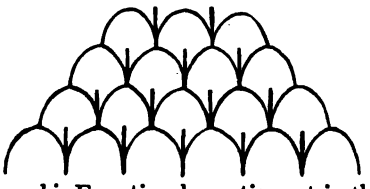

Fig. 47. Pattern used in Egyptian decorative art in the XIIth dynasty.

(*Mon. Ant.* 1902, XII, cols. 93 and 94, Fig. 28). The pattern became a favorite one not only because it was adapted to inlay and to filling large areas of vase surface but also because, in view of its graceful outlines, it made a background not inappropriate for a natural scene. To such an end it is used in *Mon. Ant.* 1903, XII, Part I, col. 65, Fig. 52, and in the steatite relief of an archer in *B. S. A.* 1899-1900, VII, p. 44, Fig. 13.

An excellent example of a mixed design which combines imitative and non-imitative is yielded by the Zakro pit bowl in Fig. 38. Here the decorator started out with a spiral which he drew in the orthodox way until he came to the outer coil which he broadened after the manner of the "rock-work" pattern. One of these lobes he lengthened into a leaf and thus obtained two diverging lines between which he could start a stalk in a semi-naturalistic fashion.

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[1] See *Abydos* I, Pl. LXI, 9. This use of the pattern was not abandoned in Cretan art. See the birds on the seal stones in *B. S. A.* 1903-4, X, p. 56, Fig. 19. Possibly the scale pattern on the skirt of the goddess in *J. H. S.* 1901, XXI, p. 108, Fig. 4, and on the costume of the leader of the harvesters on the well-known Hagia Triada vase (*Mon. Ant.* 1903, XIII Pl. I) where the scales go the wrong way for a coat of mail, may represent festal garments of feathers. But the pattern is sometimes used where it did not represent feathers, e. g., in *B. S. A.* 1900-1901, VII, p. 29, Fig. 9 and *ibid.* 1901-1902, VIII, p. 107, Fig. 65.

[2] See *Beni Hasan* III, Pls. II, 7 and VI, 103.

[3] *B. S. A.* 1902, 3, IX, Pl. III. Compare *Phylakopi*, Pl. XXIX, 7.

[4] *B. C. H.* 1878, II, Pl. XIV, 1.

The flower which he put on the stalk is no real flower. The only truly naturalistic element in the design is the pair of tendrils springing from either side of the stem.

We have already had occasion (p. 27, footnote) to refer to the frescoes of the villa at Hagia Triada, which date from the end of this or from the beginning of the next period. Like the most characteristic class of vases of this period, their designs[1] are highly naturalistic in character. These plant motives—sprays of leaves and flowers—Prof. Halbherr has pointed out[2] to be local rather than Egyptian, so that here again, in the realm of wall decoration, we find evidence for the originality of Cretan artists.

Late Minoan II.

We come now to the second division of the Late Minoan II period. Again no break in continuity separates this from the preceding period. On the contrary, here, more than elsewhere, the transition from one style to another is gradual. The vases and vase fragments of this period might be arranged in a series, the first member of which would be scarcely distinguishable from the vases of the Late Minoan I period and the last from the Late Minoan III period. In fact, it seems scarcely possible to include Fig. 48 and Pl. III in the same class, and yet they belong to well defined groups which, as a whole, could not be put into any other period.

The technique of vases of this period differs but little from that of the foregoing period except that the decoration is now applied in the dark glaze paint alone without superadded white.

Characteristic of this period are large decorated amphorae and pithoi, standing, some of them, as high as 1.20 m. (Pl. II). The habit of decorating large vessels gives rise to a showy and, as Dr. Evans terms it, a quasi architectonic style, the beginnings of which may be traced in the preceding period, but the full culmination of which takes place in this epoch. There is observable in this style, especially towards the end of the period, a *horror vacui* from which Late Minoan I vases were free. Parallel to this tendency toward stop-gap ornaments and a "close" style is to be noted a change in the syntax of designs. Designs are now frequently divided up either vertically (Pl. III), obliquely (*J. H. S.* 1904, XXIV, Pl. XI), or horizontally (*Prehistoric Tombs*, p. 158, Fig. 143). However, this period at its best, or as a whole is not decadent. Fig. 50 and Pl. II show the rare artistic skill which potters display, both in inventing designs and in adapting them to the field of the vase.

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[1] See *Mon. Ant.* 1903, XIII, Part 1, Pl. VII-X.

[2] *Ibid.* cols. 55-60.

Every class of design except complex non-imitative is represented in the decoration of this period. In contrast with the designs of the preceding period it should be noted: (1) that the bulk of the designs has now shifted from the pure naturalistic to the conventional naturalistic class, and (2) that combinations of different kinds of design are more frequent. With these remarks by way of preface, we may look at these designs class by class.

Figs. 48 and 49 may be cited as evidence that pure naturalistic designs are not wanting in this period. The pea design (Fig. 48) from the northwest building at Knossos is typical. The shape of the pea blossoms has been truly rendered. The stalks curve upward after the manner of a growing vine and

Fig. 48, from *B. S. A.* 1902–3, IX, p. 117, Fig. 72.

yet the artist has not cared to draw the plant so accurately that the spectator could see at a glance what species it was. The realism here is again of a limited kind. Leaves and tendrils are omitted from among the blossoms and the whole plant is set on the same leafy stalk from which a palm or papyrus plant is commonly pictured as springing.[1] The same observation may be made of the designs in Fig. 49. These lanceolate leaves are lifelike and are set gracefully on their stems, but they grow as no leaves ever grew.

Of the marine designs in Fig. 50, the Zakro filler in *J. H. S.* 1902, XXII, Pl. XII and the vases regarded by Mr. Bosanquet as Cretan importations into Melos (*J. H. S.* 1904, XXIV, Pl. XII), little further comment is necessary. It is important, however, to point out the skill in composition which they display. In the filler bottle from Palaikastro, for example, the wider space

[1] This leafy stalk goes back to the Middle Minoan II period. See Pl. I.

on the shoulder is filled with a design of rock-work and seaweed enclosing a large star, while to the narrowing field below are nicely adapted the tapering murex or Triton shells.[1] The star on the Zakro filler Mr. Hogarth thinks could not be regarded as a starfish since it is treated much more conventionally than the other forms of marine life on the same vase.[2] This reason for his view does not seem conclusive inasmuch as it is characteristic of this period to combine pure naturalistic with conventional naturalistic designs. There is, however, good evidence to show that the star was a conventional or rather symbolical design. On a larnax from Palaikastro (*B. S. A.* 1901–2, VIII, Pls. XVIII and XIX) of the succeeding period, it occurs in one design without forms of marine life and together with the double axe and horns of worship. Moreover, the eight-rayed star and the double axe are often associated in the signs which mark the blocks of the Knossos palace (*B. S. A.* 1903-1904, X, p. 29). In explanation of the design of the Palaikastro larnax Sig. Savignoni (*Mon. Ant.* 1905, XIV, Part 2, col. 575) says that the

Fig. 49, from *J. H. S.* 1903, XXIII, p. 195, Fig. 11.

Fig. 50, from *B. S. A.* 1902–3, IX, p. 311, Fig. 10.

bird stands for the human soul, the rock-work pattern around the border for the river encircling the world, and the star and double axe for the divine ruler of light above. Without admitting all of his theory, we may yet attribute to the star religious significance. On the Zakro and Palaikastro vases it seems to have been chosen not only for its symbolical meaning but also for its artistic value in the design.

The most frequently repeated of the conventional naturalistic patterns of this period is the "leaf pattern" (see Pl. III). One reason for the popularity

[1] Compare Bosanquet, *loc. cit.* p. 321.
[2] *J. H. S.* 1902, XXII, p. 334.

of this ornament was doubtless that it was easy to draw. A potter must have been able to put the pattern in very rapidly with a brush, especially in narrow areas like the band in Pl. III where there were outer limits to help to keep the pattern even. Similarly long narrow moulds for this pattern, into which the metal worker would hammer rims or border patterns on his sheets of bronze or gold, cannot have been difficult to make.[1]

Groups of three leaves, generally hanging in pendant form, occur frequently in this period both as a main decorative motive and as a stop-gap ornament (Fig. 67, *Athen. Mitt.* 1886, XI, Pl. III; *J. H. S.* 1903, XXIII, p. 192, Fig. 10) and among the imported fragments at Phylakopi (*Phylakopi*, Pl. XXXI, 2).[2]

Fig. 51, from *B. S. A.* 1902–3, IX, p. 311, Fig. 9.

In Fig. 52 appear various forms of conventional and conventionalized flowers which characterize this and the following period.[3] The papyrus blossom (*m*), which is still quite close to the Egyptian prototype, and the lily (*k*), which is characteristic of Late Minoan I pottery, seem to have been the types from which most of these forms sprang, though, as might be expected, the types have, in many cases, become confused. The utter disregard for consistency which Mycenaean potters sometimes display is well illustrated in Fig. 52 *l*. The presence of rosettes within the coils of the two petals must be explained by the habit of finishing spirals with rosettes, while the

[1] See *Prehistoric Tombs*, p. 122, Fig. 116, and Schliemann, *Mycenae*, p. 320, Nos. 482 and 483.

[2] Compare the trefoils on the Middle Minoan II sherd in *Phylakopi*, p. 149, Fig. 130.

[3] *a*, *c*, *e*, *f* and *h* are from the succeeding period.

small blossom between the flower and leaf is nothing else than a pea or bean blossom (compare Fig. 48). If the semicircular fields of ornament in Pl. III be looked at from the side, it will be seen that the central motive which Dr. Evans has connected (*Prehistoric Tombs*, p. 160) with the double axe is similar to that in Figs. 52 *j* and 56. It should therefore be regarded as a conventional flower. A frequent border pattern built up around the same

Fig. 52. a, c, e, f, h and m are from *J. H. S.* 1903, XXIII, p. 192, Fig. 10 and p. 197, Fig. 13; b, d and g are from *Prehistoric Tombs*, Pl. C, opp. p. 156, Pl. CI, opp. p. 157 and p. 158, Fig. 143; i, j and l are from pottery found in 1900 in Knossos houses by Mr. D. G. Hogarth.[1]

papyrus core is shown in Fig. 53.[2] During this period the tendency is gaining ground to fill in the field of the flower with lines (Fig. 52, *b*, *d*, and *i*). This tendency develops parallel to the *horror vacui* which indicates not only a dearth of artistic inspiration but also the decline of imitative design. For

[1] For permission to publish these last designs and Figs. 53, 56, 58, 59 and 60, I am indebted to the courtesy of Mr. Hogarth.

[2] Compare the design in the upper right corner of the lower mould in Schliemann, *Mycenae*, p. 107, No. 162.

the potter, in filling the empty spaces between the main lines of the design, shows that his thought is not on the ornament he applies but on the field he decorates. The abundance of stop-gap ornaments in this and the succeeding period would have foretold the return of a geometric style of ornament even if that style had not been known before the art of the bronze age was revealed.[1]

The insertion of flower types within heartshaped leaves (Figs. 54 and 55) is frequent in this as in the preceding period (compare Fig. 36). The explanation of the origin of these patterns given on page 30 will be confirmed by a comparison of them with Fig. 52 *l*. The running "ivy leaf" pattern in Fig. 56[2] is to be explained in the same way, except that in this case the recurving ends of the ivy leaf pass into the ends of the flower itself, not into the leaves below it.

Fig. 53. Design on a Sherd from a Knossos House.

The rock-work pattern might in this period be quite as well classed with the non-imitative as with the imitative designs, for it is used in the majority of cases without any thought of picturing the natural surface of the ground. Most frequently it is employed for decorating the necks of vessels (*Prehistoric Tombs*, Pl. C, opp. p. 156 and Pl. CI, opp. p. 157), but it is also used in the framework of a design.[3] The habit of using this pattern for framing a design was doubtless formed in the school of fresco painting (see *Phylakopi*, Pl. III). It seems to have become so fixed that decorators continued to apply it in places where it was quite inappropriate, as on the bodies of animals. Thus in the Tiryns bull fresco (*Tiryns*, Pl. XIII, opp. p. 352) it is applied as if the outlines of the bull's body were to be the frame for a picture.[4]

Among the non-imitative patterns, spirals, dots, and festoons continue in use during this period. The spiral is frequently enriched by a rosette

[1] Compare R. M. Dawkins, *B. S. A.* 1902-3, IX, p. 316.

[2] Compare *Prehistoric Tombs*, p. 158, Fig. 143.

[3] Compare the later larnax from Palaikastro in *B. S. A.* 1901–2, VIII, Pls. XVIII and XIX.

[4] Compare also the horses in *Myk. Vas.*, Pl. XLI. Curiously enough this method of decorating animals' bodies persisted until the sixth century when it appears on the Clazomenae sarcophagi (e. g., *Ant. Denk.* I, 44).

within its volute (*Prehistoric Tombs*, p. 69, Fig. 75 and Pl. C, opp. p. 156). A row of spirals to which horns are added for the sake of making a closer pattern[1] is frequently used for a border decoration (Pl. III). The quirk, which has occurred in every earlier period and which recurs in the next period does not, so far as noticed, occur now.

Both of the scale patterns described on pp. 32 and 33 reappear in this period. On unpublished sherds found by Mr. Hogarth in 1900 near the Knossos palace

Fig. 54, from *Prehistoric Tombs*, p. 156, Fig. 141 b.

Fig. 55, from *J. H. S.* 1902, XXII, p. 192, Fig. 10.

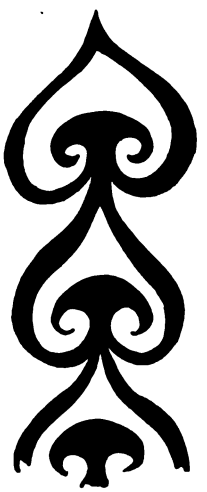

Fig. 56, from a Sherd from a Knossos House.

occurs the counterpart of the Egyptian scale pattern in Fig. 47 and again a pattern similarly reticulated but embellished by large dots instead of by stalks. Especially characteristic of this period is the other type of reticulated pattern, examples of which with various central ornaments are shown in Figs. 57 to 59.[2] It will be noticed that the favorite ornament is a conventional flower, which helps to give that quasi naturalistic effect in which Mycenaean artists delighted. The trefoil arches of this pattern are used in rows for a

[1] See Edgar, *Phylakopi*, p. 130.

[2] Compare *Myk. Vas.*, Pl. VI, 32, XII; Pl. XXVII, 217; and Pl. XXXII, 306, 307, and 308.

border decoration (Fig. 59), and separately in floral decoration[1] to represent rocks or the surface of the ground. Yet in such design the use of the ornament seems due in part to the fact that, because of its shape, it made a useful motive for filling in the semicircular space left between the spreading leaves of two plants.

On faience plaques from Knossos, Mycenae, and Tel-el-Yehûdiyeh in Egypt occurs a sign like the late form of the Greek letter Alpha (*B. S. A.* 1899-1900, VI, p. 42; *Prehistoric Tombs*, p. 110, footnote, and *J. H. S.* 1904, XXIV, p. 328). This sign was evidently taken over as a decorative motive for pottery of this period (see Fig. 60). In some cases the pattern seems to have been confused with a flower type. The combination of this motive with spirals shown in Fig. 60 is repeated on Naukratis ware (*Naukratis*, II, Pl. IX, 5).

Fig. 57, from *Athen. Mitt.* 1886, XI, Pl. III.

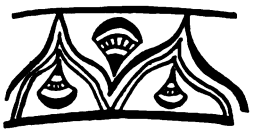

Fig. 58. Design on a Sherd from a Knossos House.

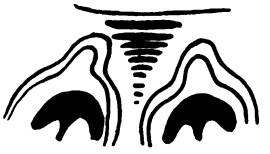

Fig. 59. Design on a Sherd from a Knossos House.

The checkerboard pattern which marks off the field of ornament in Pl. III is noteworthy for two reasons: first, it resembles the checkerwork in the architectural fragment of the "miniature" fresco in *J. R. I. B. A.* 1903, X, third series, p. 113, Figs. 15 and 21, which has already been compared[2] to Egyptian monuments of the Vth and XIIth dynasties,[3] where generally, however, such bands represent the architectural framework of a door, and secondly, it forecasts a characteristic decoration of the Cretan geometric style.[4]

Fig. 61 shows a mixed design of this period. It is made up of spirals, tendrils, and groups of blossoms combined in much the same way as were the designs in Figs. 25 and 38.

During the period of the great palaces at Knossos and Phaistos many arts besides vase painting must have flourished. To the skill of the worker in

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[1] On the reverse of the jar in Pl. II.

[2] See Evans in Archaeological Report of the Egyptian exploration fund 1899-1900, p. 60 and *Prehistoric Tombs*, p. 160, footnote.

[3] *Deshasheh*, Pl. XXVII; *Ptahetep* I, Pl. XXa; *Beni Hasan* I, Pl. XXXVII and *ibid.* IV, Pl. XXI.

[4] *Athen. Mitt.* 1903, XXVIII, p. 159 and Pl. XVII, opp. p. 144.

metal the bronze vessels from the northwest building at Knossos and the swords from the Zafer Papoura graves bear witness. The more noteworthy ornaments on these, the "leaf pattern" (*B. S. A.* 1902-1903, IX, p. 124, Fig. 77), the ivy leaf (*ibid.* p. 126, Fig. 80), a conventional lily (*ibid.* p. 127, Fig. 81),

Fig. 60. Designs on Sherds from Knossos Houses.

and spirals (*Prehistoric Tombs*, p. 56, Fig. 58) are frequent in vase painting. The design of wild goats and lions on the agate sword handle from a Zafer Papoura tomb (*Prehistoric Tombs*, p. 57, Fig. 59) shows more affinity for the

Fig. 61, from *B. S. A.* 1903–4, X, p. 206, Fig. 4.

gem cutter's art, in which animals are frequent subjects. The ground of this scene, however, is indicated by a conventional representation of rocks, similar to that in fresco painting, from which the more cursory representation of the vase painter was adopted. Mr. Evans thinks that the "leaf pattern" was taken[1] over by potters from metal vases. This is the natural course of events,

[1] *Prehistoric Tombs*, pp. 121 and 122.

that less costly products should imitate the more costly, yet the ease with which this pattern can be applied with the brush and the fact that it appears on a Zakro vase in the Late Minoan I period make it seem possible that its use in ceramic art is as ancient as its connection with metal vases.

In the Zafer Papoura graves near Knossos, considerable quantities of jewelry were found of the types known at Phaistos, Mycenae and elsewhere. In some cases (e. g., grave 36, *Prehistoric Tombs*, p. 58, Fig. 60) these jewels were found in graves assigned to the Late Minoan II period. But since the majority of these gold ornaments belongs in the Late Minoan III period, they will be considered later as an undivided group.

Most closely akin to the ceramic art in method is the art of fresco painting, especially during this Late Minoan II period. The larger vases presented as extended a field for decoration as that occupied by fresco pictures. Such jars as that in Pl. II were very likely made to match the decoration of the room in which they stood. Further, the smaller patterns on "miniature" frescoes, borders, and other small areas of painted plaster offer many analogies to the patterns used on vases.

On Late Minoan II frescoes appear purely naturalistic motives, like the lily (*B. S. A.* 1901-1902, VIII, p. 92), sprays of leaves (*ibid.* p. 110), grasses (*B. S. A.* VII, p. 59), the ivy leaf (*J. R. I. B. A.* 1902, p. 129, Fig. 71) and marine designs (*B. S. A.* 1901-1902, VIII, p. 58), as well as conventional naturalistic designs like marguerites (*J. R. I. B. A.* 1902, Pl. I), papyrus blossoms (*ibid.* p. 125, Fig. 63), the leaf pattern (*ibid.* p. 123, Fig. 50), heartshaped leaves with flowerlike appendages like those in Fig. 36 (*ibid.* p. 117, Fig. 40, p. 125, Fig. 62 and p. 130, Fig. 81) and several designs like the double axe and horns of worship (*ibid.* Pl. II). Among the non-imitative designs are the scale patterns of Figs. 57–59 with various central ornaments (*ibid.* p. 123, Fig. 52 and p. 128, Fig. 69), spiraliform ornaments of different types, including the "horned spiral" (*ibid.* p. 121, Figs. 45 and 46)—which may well have arisen in the effort of the fresco painter to adapt a spiraliform design to the square field of a ceiling or wall—the spiral with a rosette center (*ibid.* p. 120, Fig. 43), the checkerboard pattern (*ibid.* Pl. II), and various simple linear patterns, known on Late Minoan I and Late Minoan II vases.

Thus the repertoires of the potter and the painter of frescoes are largely identical. The most characteristic patterns of the vases of this period, like the scale pattern and the ivy leaf types, are conspicuous in the designs of frescoes. Only one pattern on painted plaster—the tooth ornament—(*ibid.* p. 127, Figs. 64–67) does not appear on vases. It is quite likely that for palace products at least, the same artists were employed to decorate both walls and vases. However that may be, it is impossible to ascribe to either vases or fresco painting a predominant influence in setting the style of decoration.

Late Minoan III.

And now, finally, we come to that period of "Mycenaean" culture widely known from other sites than Crete. During this period a style of ornamentation prevailed, which, compared with that used in preceding periods, is lifeless and uninteresting, but which, nevertheless, has given to most people their idea of Mycenaean art.

In this period are included two groups of vases. The one stands at the very beginning of the period and marks the transition from Late Minoan II style; the other stands at the end of the period and marks the lowest ebb of Mycenaean art just prior to the rise of the geometric style. The one group includes pottery from block γ in Palaikastro (see table), from the Zafer Papoura graves at Knossos, and from the necropolis at Phaistos (see table). It is charac-

Fig. 62, from *B. S. A.* 1902–3, IX, p. 318, Fig. 17.

terized by the "close" style,[1] the beginnings of which go back to the preceding period (see p. 34). The other group is made up largely of the ceramic remains of the "squatter" civilization at Knossos and Palaikastro. It is marked by the frequency of the degenerate octopus ornament. In this later period there is a falling off in the quality of both clay and paint. The *bügelkanne* is again a common shape.[2]

Few pure naturalistic designs are in use during this period. The most lifelike of the decorative motives which occur are fishes and birds (Fig. 78, *Mon. Ant.* I, Part 2, Pl. I; *J. H. S.* 1903, XXIII, p. 198, Fig. 14; *Mon. Ant.* 1905, XIV, Part 2, Pl. XXVIII; *Myk. Vas.* Pl. XIV, 87). Both of these motives have occurred occasionally in earlier Cretan art. A fish is the main decorative motive on a Middle Minoan II vase in *Mon. Ant.* 1895, VI, Pl. IX, 8, and on a cup of the same period from Gournia. It figures again on a Knossos vase-fragment (*B. S. A.* 1902–3, IX, p. 115) of the Late Minoan II style and in the frescoes and among the faience models of the later palace. Birds also are not unknown in earlier art (*J. H. S.* XXIII, p. 198, Fig. 14). But nowhere

[1] *B. S. A.* 1902-3, IX, pp. 316 and 317.
[2] See *Prehistoric Tombs*, p. 121.

in earlier art do these motives assume the prominent position in the potter's repertoire which they hold during this period. In view of the frequency with which they appear and of the unnatural juxtaposition into which they are brought (e. g., *Mon. Ant.* 1891, I, Part 2, Pl. I and *ibid.* 1905, XIV, Pl. XXXVII) they may be regarded as symbolical of the heavens and of the

Fig. 63, from *B. S. A.* 1902–3, IX, p. 315, Fig. 14.

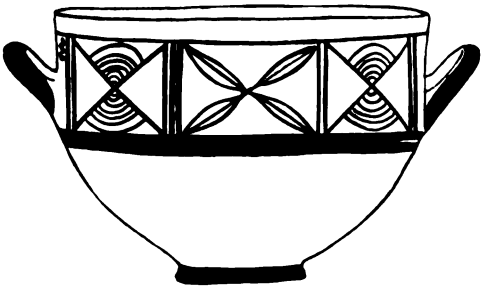


Fig. 64, from *B. S. A.* 1902–3, IX, p. 319, Fig. 19.

sea.[1] Something of this symbolical meaning may have still been attached to birds and fishes in the geometric period when they again appear in the midst of a purely geometric style (*Athen. Mitt.* 1903, XXVIII, Pl. III,—opp. p. 104,—2; Pl. VI, 2—opp. p. 105—and Pl. XXXII, 2,—after p. 192,—etc.).

Fig. 65, from *B. S. A.* 1902–3, IX, p. 319, Fig. 18.

The class of design most characteristic of this period is the conventionalized naturalistic class. In Fig. 52, *d*, *f*, *g*, *h* and *j*, are shown various shorthand methods of rendering flowers. The most naturalistic Late Minoan III flower-type is Fig. 52 *h*, which is not far removed from the lily in Fig. 1. In the next stage of degeneration, the row of stamens becomes a row of dots, while the center of the flower is indicated by curving cross-lines (Fig. 52 *j*) or by more

[1] Compare the above mentioned view of Sig. Savignoni in *Mon. Ant.* 1905, Part 2, XIV, col. 572 ff.

dots (Fig. 52 *g*). Finally this cursory rendering of flowers became so habitual with the potter that whenever two lines in his design made an angle, he could not resist filling in the angle with cross-lines as if it were a bud (Figs. 63–65, Ἐφ. Ἀρχ. 1904, Pl. I, and *Prehistoric Tombs*, p. 22, Fig. 14, etc.). In Fig. 65

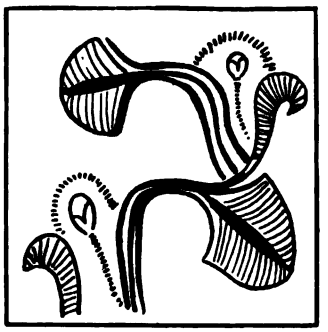


Fig. 66, from *Mon. Ant.* 1891, I, Part 2, Pl. I.

dots are retained to indicate stamens. The papyrus type of flower is sometimes clearly distinguishable from the lily (Fig. 66, *Prehistoric Tombs*, p. 91, Fig. 102, and *Mon. Ant.* 1891, I, Part 2, Pl. I, 3). The smaller flowers between the papyrus leaves in Fig. 66 will be recognized as the equivalent of the central ornament in the semicircular designs of Pl. III. The ends of this

Fig. 67, from *B. S. A.* 1902–3, IX, p. 214, Fig. 5.

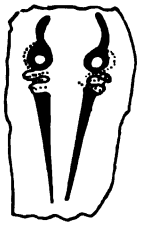


Fig. 68, from *Myk. Vas.* p. 23, Fig. 13.

ornament are in one case joined below in a meaningless circle, while the stamens, leaves and stem are indicated in the linear method of the period.

To the conventionalized naturalistic class belong also the debased forms of octopus and Triton shell prevalent in this period. In Fig. 67 the once life-like octopus has been reduced "to a mere symmetrical center to a continuous series of curves."[1] The ornament in Fig. 68 is generally regarded as a debased form of murex or Triton shell.[2]

[1] *Prehistoric Tombs*, p. 127.

[2] See Schliemann, *Mycenae*, p. 138 note; Fabricius in *Tiryns*, p. 349; Hogarth, *J. H. S.* XXII, p. 337 and Fig. 16, and Evans, *Prehistoric Tombs*, p. 128.

Finally, among the conventionalized naturalistic designs of this period should be mentioned the "rock-work" pattern which is used both to indicate the surface of ground, as in *Prehistoric Tombs*, p. 91, Fig. 102, and to fill in space, as in *Mon. Ant.* 1905, etc. In the latter case it receives the same cross-lined, geometric style of treatment as that which flowers of this period undergo.

Of the non-imitative designs with which we have become familiar only a few simple motives remain in use. These are the spiral, the checkerboard pattern (*Mon. Ant.* 1905, XIV, Part 2, Pl. XXXVII), and the quirk. The linked spiral design in *Prehistoric Tombs*, p. 91, Fig. 102a, is evidently, as Mr. Evans has pointed out (*ibid.* p. 90), an adaptation of designs on contemporary Egyptian chests and ceilings.

Among the important objects belonging to this Late Minoan III period are numbers of small gold and paste ornaments closely analogous to those which have been found at Spata, Dimini, Ialysos, and Mycenae (see table, opp. p. 50). These finds come mainly from the Zafer Papoura graves near Knossos and from the necropolis at Phaistos. The motives chiefly used for their decoration are the following: a pair of nautili similar to those which appear on Late Minoan I vases, arranged to fill a rectangular area (*Mon. Ant.* 1905, XIV, Part 2, col. 595, Fig. 59, and *Prehistoric Tombs*, p. 130, Fig. 119); butterflies (*Mon. Ant.* XIV, Part 2, col. 601, Fig. 66); flowers (*ibid.* col. 597, Fig. 61, and *Prehistoric Tombs*, p. 76, Fig. 85, and p. 130, Fig. 119); pairs of spreading petals (*Mon. Ant.* 1905, XIV, Part 2, col. 599, Fig. 62); rosettes (*ibid.* and col. 601, Fig. 63, and *Prehistoric Tombs*, p. 130, Fig. 119); conventionalized lilies (*Mon. Ant.* XIV, Part 2, col. 609, Fig. 78);[1] leaves of the ivy or heartshaped type with central ornaments and triangular attachments to fill the intervals between the leaves (*ibid.* col. 611, Fig. 80, and col. 614, Fig. 81); spirals with similar attachments (*ibid.* col. 609, Fig. 78); an ornament consisting of a single pendant spiral or curl (*ibid.* col. 614, Fig. 82); lobes of the scale pattern of Fig. 62 (*ibid.* Fig. 83); and the sacred shield (*Prehistoric Tombs*, p. 44, Fig. 41).

The designs of these small ornaments are exactly those with which we have become familiar on vases. Only one or two, the pendant curl and the butterfly, are foreign to the potter's repertoire of patterns. The prevalence of these designs in these minor arts of gold and paste ornaments may have aided in fixing the type of such motives as the conventional lily, the ivy leaf and the nautilus. Goldsmiths are not so liable to careless workmanship as potters. In some cases a reacting influence from the designs of jewelry may have been

[1] Compare Schliemann, *Mycenae*, p. 183, No. 278 and p. 199, No. 303, and *B. C. H.* II, Pl. XV, 3, 4 and 5.

exerted on vases. The strings of buds in *Myk. Vas.* Pl. XXXIV, 336, look like the necklace of gold beads in the form of buds which is shown in *Mon. Ant.* 1905, XIV, Part 2, col. 597, Fig. 61.

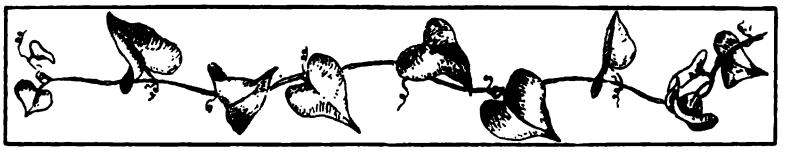
Conclusion.

The designs which we have examined record some two thousand years of artistic development. At the beginning of this period man's instinct for balance, rhythm, and harmony is satisfied by the simplest linear geometric ornament, notably by the zigzag. The established use of the brush is influential in the transformation of this rectilinear into curvilinear ornament and many experiments in curvilinear decoration follow in the Early Minoan III period. Among them are motives which look like natural objects and gratify the primitive instinct for imitative art. Conventional naturalistic designs, thus casually begun, continue throughout the Middle Minoan II period with growing realism; but more typical now is non-imitative ornament, which includes a large variety of simple motives as well as complex designs constructed for the sake of balance, rhythm, and harmony. Some of these non-imitative designs reach a high degree of artistic merit, while others are crude and fantastic. The prevalence of this class of design is parallel to the use of polychromy. In the Middle Minoan III period pure naturalistic designs supersede non-imitative designs. Their introduction is to be attributed in part to Egyptian influence, but Cretan designers, trained by long practice in artistic arrangement of line and color, are able to secure more naturalistic as well as more decorative effects than Egyptian artists. This change to a naturalistic style is effected on pottery which for technical reasons must be regarded as the direct descendant of Middle Minoan I and II ware. Moreover, the non-imitative patterns of preceding periods are frequent still, so that no violent break can be assumed before the introduction of the naturalistic style. In the succeeding Late Minoan I period the same naturalistic style prevails, and various new ways of combining naturalistic motives are invented. A large stock of non-imitative motives inherited from the early and middle periods are also in use. In the period of the great palaces at Knossos and Phaistos, conventional and conventionalized flowers replace, in part, naturalistic motives. The beginning of a tendency to divide up the fields into small areas is observable. In the Late Minoan III period, designs are neither adapted from nature nor invented, but instead debased forms of naturalistic motives are unintelligently copied. The artist's chief concern is to pack with ornament the panels or zones into which he divides his fields. Such a system of decoration not only indicates lack of artistic originality but also heralds the approach of a purely geometric style.

The statement of Professors Furtwängler and Löschcke quoted on page 5 had reference, it will be remembered, to vases with lustrous paint. This class

of vases is in general equivalent to the vases of the three Late Minoan periods, when naturalistic designs prevailed over every other kind of ornament. Consequently the statement that these designs were in the main naturalistic is quite in accord with what we have found to be true. But the derivation from weaving of the non-imitative motives used during this period is not now plausible, for it is clear that the quirk, the ripple motive, the festoon, and most, in fact, of the non-imitative patterns, were native to vases. Moreover, unless due importance is attached to the earlier, non-imitative designs, the most characteristic features of "Mycenaean" ornament will not be rightly understood. For the skill which artists of the Late Minoan periods display both in arranging naturalistic motives with a maximum of decorative effect and in combining imitative and non-imitative motives with a maximum of lifelike effect, must be attributed to their inheritance from earlier periods when designs were made solely for the sake of balance, rhythm, and harmony of line.

EDITH H. HALL.



ε	*Ibid.*, and Fig. 4.				
ξ	*Ibid.*, p. 208.				
Zakro houses.	Hogarth, *B. S. A.* VII, p. 132.				
	Hogarth, *J. H. S.* XXII, pp. 333-335, Pl. XII, 1.				
	Dawkins, *J. H. S.* XXIII, p. 255.				
Knossos, Zafer Papoura graves.	Evans, *Prehistoric Tombs*, pp. 1-135, Figs. 17, 33, 67, 73, 75, 83, 102, 114, 116, 151.	Gold and paste ornaments from the Necropolis at Phaistos, similar to those found in the Vapheio, Ialysos, Dimini, Spata, etc., tombs.	Pernier, *Mon. Ant.* XIV, cols. 591-617.	ases and gold and paste ornaments from Ialysos.	Furtwängler and Löschcke, *Myk. Vas.*, Pls. I-XI, A, B and C.
Royal tomb (niche).	*Ibid.*, p. 141, Fig. 122.			Vases from Nauplia.	*Ibid.*, Pl. XV.
"Squatter" houses.	Mackenzie, *J. H. S.* XXIII, p. 197.			Vases from Mycenæ.	*Ibid.*, Pls. XXIII-XLIII.
Phaistos, late deposits.	Pernier, *Mon. Ant.* XII, col. 117, and Pl. VIII, 4.			Vases and gold, glass, paste, and ivory ornaments, from Spata.	Haussoulier, *B. C. H.* II, pp. 185-228, Pls. XIII-XIX.
Necropolis.	Pernier, *Mon. Ant.* XIV, cols. 557-577, Figs. 42-46, Pls. XXXVII and			Vase-fragments from Tel-el-Amarna, Egypt (XVIIIth and XIXth dyns.).	Petrie, *Tel-el-Amarna*, Pls. XXVI-XXX.

PLATE I.

Two decorated jars of the Middle Minoan II period. From Mon. Ant., 1905, XIV, Part II, Pl. XXV.

PLATE I.

Two decorated jars of the Middle Minoan II period. From Mon. Ant., 1905, XIV, Part II, Pl. XXV.

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2

TWO DECORATED JARS OF THE MIDDLE MYCEAN II PERIOD

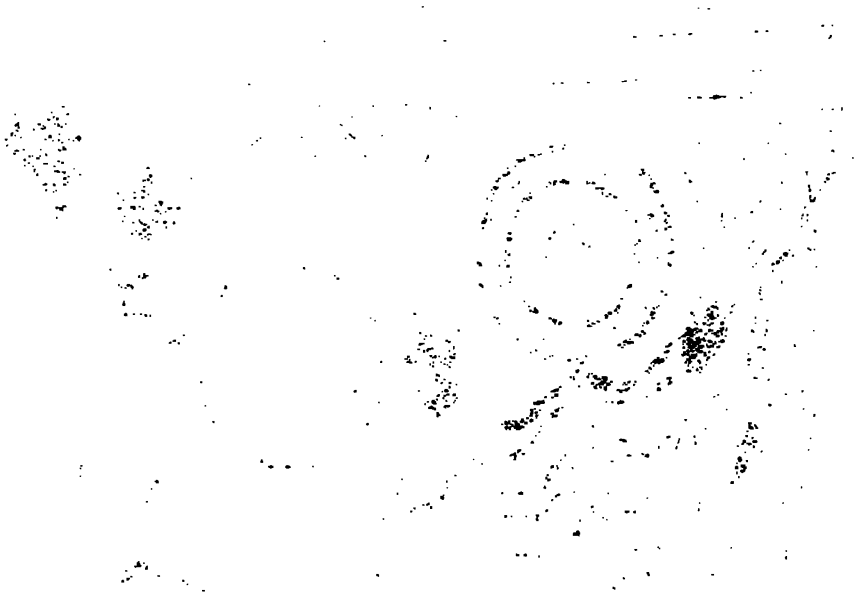
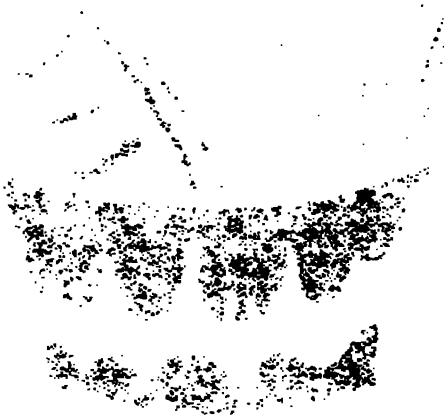


PLATE II.

Decorated Vase of the Late Minoan II period. From the British School Annual, 1902-3, IX, p. 139, Fig. 88.



DECORATED VASE, LATE MINOAN II PERIOD.

Reproduced from the *British School Annual*, 1902–3, IX, p. 139, Fig. 88.

PLATE III.

Decorated Vase of the Late Minoan II period
From *Prehistoric Tombs*, p. 159, Fig. 144.

DECORATED VASE OF LATE MINOAN II PERIOD.

From *Prehistoric Tombs*, p. 159, Fig. 144.

35138

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Reinach, Adolph, J

des chefs achéens; en tant que fils d'Oïleus, il commet l'attentat contre Cassandre et périt dans une tempête, au Sud de l'Eubée. Comme fils de Télamon, il acquiert une patrie, il se fixe, lui errant jusque là; il devient un Éginète, un Salaminien. Je ne sais si les raisons que donne M. de Wilamowitz pour expliquer ce fait, sont les meilleures (1); je croirais plutôt que l'adoption d'Ajax par Égine et par Salamine fut le résultat d'anciennes migrations. Ce qui n'est pas douteux, c'est le grandissement du personnage par suite du voisinage d'Athènes. L'histoire proprement dite et l'histoire littéraire nous le montrent porté par le flot de la vanité et de la puissance athéniennes. Dès lors, sa gloire est assurée. Il est un des patrons, un des *saints* de l'Attique; une tribu emprunte son nom; les Athéniens le mêlent à leurs légendes; Sophocle étale ses malheurs sur la scène. Si l'on rapproche de cette fortune son humble origine, ce *pieu* qui jadis lui servait de retraite, au temps où il n'était que le bon génie des petites gens, on ne peut qu'être saisi d'une admiration profonde pour le génial auteur de sa métamorphose, pour cette âme grecque qui a fait de lui un héros, et le plus poignant, peut-être, le plus douloureux des héros, qui l'a frappé de démence et lui a rendu la raison pour le conduire à un suicide pathétique, qui a mis dans son cœur les plus nobles sentiments, l'a fait vibrer des plus tragiques émotions, qui a su, pour parler comme l'Hamlet de Shakespeare, *éveiller*, après tant de siècles,

le concert endormi dans ce morceau de bois.

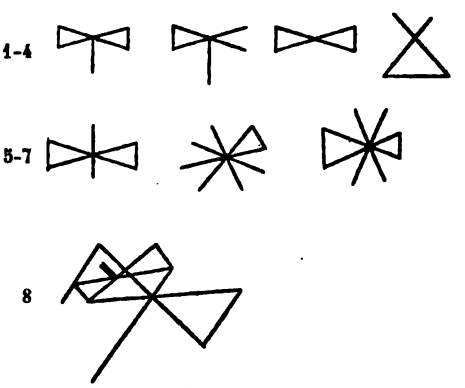
(1) *Homer. Untersuchungen*, p. 245 et suiv.

Paul Girard.

A PROPOS DES EMPREINTES MURALES DE KNOSSOS

Il n'est peut-être pas à Knossos une pierre de taille qui ne porte plus ou moins en évidence quelque signe très simple fait de lignes géométriques diversement combinées. La variété de ces combinaisons élémentaires n'est pas très considérable; elles diffèrent entre elles, mais on peut grouper ces individus divers en familles de signes dans chacune desquelles on retrouve aisément un seul et même type primordial.

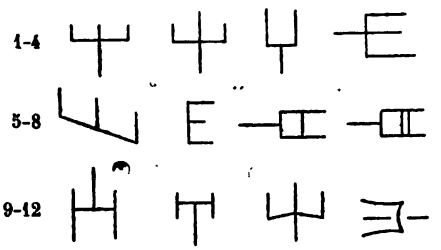
1° La *bipenne*, soit complète [1], soit incomplète — il manque ou un côté [2] ou le manche [3] ou un côté et le manche [4], — tantôt avec le manche traversant de part en part [5], tantôt avec



Bipennes.

deux tiges entrecroisées [6, 7] ou encore entrelacée avec une seconde bipenne [8]. Lorsqu'il manque un côté à la bipenne et qu'elle est traversée par deux tiges supplémentaires [6], il devient difficile de la distinguer de l'*étoile*.

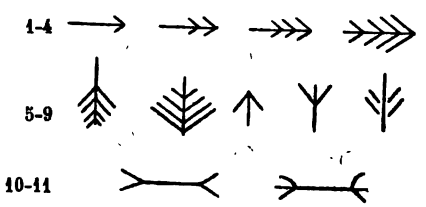
2° Le *trident* ou *bident* avec tige [1, 2, 3, 4] ou sans tige [5, 6], avec les deux branches séparées, ou réunies par une [7] ou deux [8] barres transversales, avec les branches diversement prolongées [9, 10], avec la barre transversale droite ou brisée



Tridents et bidents.

[11], avec les branches latérales recourbées, évasées et la branche centrale non pas continue, mais décomposée en deux traits nettement séparés [12] (1).

2° La *flèche,* simple [1], pennée [2], bipennée [3], tripennée [4, 5, 6], réduite à la pointe [7], avec la pointe renversée [8], avec deux pointes renversées et opposées [10], avec les deux



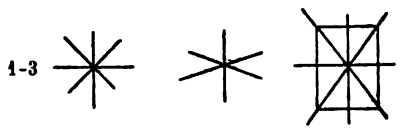
Flèches.

pointes renversées et opposées et traversées par la ligne qui les réunit, le tout légèrement convexe (2) [11], avec les pennes détachées de la barre centrale [9].

(1) On pourrait croire que ces deux derniers sous-types du type trident devraient être attribués au seul hasard : un mauvais instrument aux prises avec une pierre trop résistante. Mais comme on retrouve [12] fréquemment sur les pierres gravées; comme [11] se retrouve avec la même brisure caractéristique sur les tablettes écrites, il faut les admettre parmi les variétés du type trident. Le trident le plus régulier [1] n'a pas été relevé sur les murs de Knossos; nous le trouvons dans le rapport sur les fouilles de Phaestos (*Monum. dei Lincei*, 1902, p. 14).

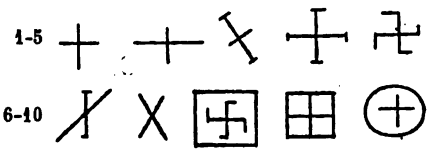
(2) Je n'ai trouvé à Knossos aucun spécimen de cette variété. Le spécimen

4° L'*étoile*, disposée souvent comme une *rose des vents* et difficile à distinguer de certaines formes complexes de *bipennes* et de *croix* [1, 2, 3].



Étoiles.

5° La *croix* (1), dont la découverte a soulevé un si vif intérêt. C'est presque toujours la *croix grecque* [1], avec des variations [2, 3] qui semblent provenir, non d'un dessein préconçu, mais de la seule maladresse de l'exécutant, combinée, peut-être, avec le désir de modifier le motif essentiel : deux droites coupées à angle droit en leur milieu. Parmi ces modifications, celle qui crée la *croix latine* — l'allongement de la barre infé-



Croix.

rieure, les trois autres étant moitié plus petites et égales entre elles — ne semble guère avoir été en usage (2). Souvent les extrémités de la croix sont marquées d'un trait perpendiculaire

reproduit ici provient de Phaestos (*Monum. dei Lincei*, 1902, p. 14); on la trouve aussi sur un talent d'Hagia Triada (cf. [3] p. 83). Quant au sous-type [9], il faut le rapprocher du sous-type [12] du trident; comme lui, il se retrouve souvent sur les pierres gravées, avec la même facture moins rigide et moins géométrique.

(1) Bien que varié, le type de la croix semble déjà stylisé. On ne remarque dans les exemplaires swastikoïdes ni cette bifidie, ni cette triangulation d'une des extrémités supérieures qui ont fait croire à l'origine animale ou végétale de la croix gammée. La sinuosité qu'ont souvent les lignes et qui rapproche la croix du *triskéle* ou du *tétraskéle* ne semble due qu'à l'inexpérience de l'artisan.

(2) Cette variation particulière du type de la croix, si elle ne semble pas se retrouver parmi les empreintes murales, n'est pourtant pas étrangère à l'art égéo-crétois; ainsi on l'a trouvée sur un sceau de Phaestos, *Monum. dei Lincei*, 1903, fig. 43, n° 1. Dans la même figure on trouve la croix entourée d'un cercle; ce curieux sous-type reparaît encore sur les tablettes écrites; je l'ai vue gravée sur une pierre détachée d'un mur à Mycènes (ville haute).

et l'on a la *croix pattée* [4]. Parfois, ces traits ne s'allongent que dans une seule direction et l'on a la *croix gammée* ou *swastika* [5]. Parfois les deux branches de la croix se coupent en X et l'on a la *croix de Saint André* [6, 7]. Enfin, ces différentes croix sont quelquefois entourées d'un carré ou d'un cercle [8, 9, 10] ou superposées, donnant ainsi des types composites qu'on ne peut distinguer de l'étoile.

Voilà donc les empreintes murales de Knossos réduites à cinq familles ou types. Nous ne pensons pas y avoir groupé *tous* les signes qu'on peut trouver à Knossos ou à Phaestos, mais bien *tous* les signes à *forme définie*. On n'a qu'à parcourir, pour s'en convaincre, sinon les lieux, du moins les publications de MM. Evans et Halbherr. On y remarquera que tous les signes qui ne rentrent pas dans nos familles ne présentent à l'esprit aucune de ces formes qui suggèrent aussitôt l'idée d'un objet déterminé ; s'ils ont jamais été des idéogrammes, ils sont tellement fragmentaires et altérés qu'on ne saurait plus les reconnaître.

Nos cinq types ont donc seuls pu avoir une valeur précise et constante. Était-elle religieuse ou architecturale, c'est ce qu'il faut maintenant examiner.

Sur ces cinq types, M. Evans a surtout mis en évidence ceux de la bipenne et de la croix, en leur attribuant une valeur religieuse. L'adjonction des trois types du trident, de la flèche et de l'étoile, ou de tout autre, n'est pas de nature à mettre en péril cette théorie. Comme on a montré dans la bipenne le symbole d'un dieu tonnant et orageux et dans le swastika celui d'un dieu rayonnant et solaire, on pourra trouver symbolisé dans le trident le principal attribut de la divinité marine ; dans la flèche et dans l'étoile, on montrera aisément, avec comparaisons classiques à l'appui, de nouveaux symboles solaires, etc. Aussi n'est-ce pas ainsi que se pose la question. Tous ces signes, que nous avons réduits à cinq types, peuvent avoir été en telle ou telle circonstance, en tel ou tel emplacement, des symboles religieux. C'est là un fait indiscutable. Mais ce que l'on peut

et ce que l'on doit mettre en doute, c'est le caractère religieux de ces signes lorsqu'on les gravait sur les pierres murales. La bipenne peut avoir été ici, sur un autel, symbole religieux, en même temps que là, sur une pierre de taille, marque de tâcheron. Passons sommairement en revue les principaux arguments qui militent en faveur de cette dernière théorie, en opposition avec celle qu'a essayé d'établir M. Evans :

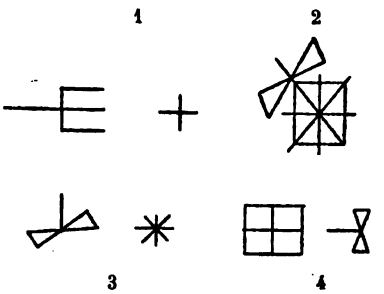
1° Il n'est presque pas de pierre bien taillée qui ne porte quelqu'une de ces empreintes. Si elles avaient une signification religieuse, on ne comprendrait pas bien qu'on les eût à ce point répandues, vulgarisées; on ne conçoit guère qu'on ait mis un symbole religieux au fond de chaque cellier où l'on ne pouvait le voir, sur chaque gradin d'escalier où l'on marchait dessus.

2° Sur les pierres qui les portent, ces signes ne sont ni mis en évidence, ni distribués d'une façon uniforme et déterminée, double condition qu'eût comportée leur signification religieuse. Tantôt ils sont perdus dans un coin, tantôt ils sont détachés au milieu de la dalle : nulle règle ne semble avoir présidé à leur distribution.

3° Non seulement cette distribution et le nombre des signes excluent toute idée religieuse, mais leur forme surtout s'y oppose. Tout signe religieux se distingue par la fixité de son type; on le reproduit toujours identique à lui-même, en lui conservant certaines proportions consacrées qui en constituent précisément le caractère cultuel. Or, rien de semblable ne se rencontre à Knossos. Chaque type comprend des variétés incompatibles avec l'hypothèse religieuse; si nos cinq types étaient hiératisés, on ne trouverait qu'*un* trident, qu'*une* croix. Est-ce que l'église catholique n'attache pas au maintien du type de la croix latine autant d'importance que l'église orthodoxe à celui de la croix grecque? C'est que le signe, dès qu'il est devenu symbole, doit être invariable comme la divinité qu'il représente. La maladresse de l'exécutant ne peut pas rendre compte de toutes ces variations; il faut reconnaître que l'exécutant ne cherchait pas à reproduire un type consacré, mais

une marque qui pût servir d'indice, soit pour la construction, soit pour le paiement.

4° Presque toutes les parois qui portent ces empreintes semblent avoir été recouvertes d'une couche de stuc ou de peinture qui devait les cacher. Sans doute on a prétendu (1) que les signes avaient pu être accusés par dessus cette couche par l'emploi de couleurs spéciales; mais on ne voit vraiment pas



Signes accouplés.

pourquoi, en ce cas, on se serait donné la peine de creuser dans la pierre des empreintes qui devaient être recouvertes ensuite, au lieu de ne les marquer que par la peinture. Un pareil procédé ne se recommande par aucun avantage; si donc on a creusé ces signes dans la pierre nue qui, la construction achevée, devait être masquée, c'est qu'ils n'avaient de rôle que dans la construction, rôle tout pratique, ni ornemental ni religieux.

5° On trouve parfois sur la même pierre deux ou plusieurs signes marqués ensemble : par exemple, le trident et la croix, l'étoile encadrée et la bipenne, l'étoile simple et la bipenne, la bipenne et la croix dans un carré (2). Sans doute l'on peut

(1) Ce sont les arguments d'A. Evans, *Journal of hellenic Studies*, t. XXI, et de S. Reinach, *L'Anthropologie*, 1902, en réponse aux critiques de Rouse : *The double axe and the labyrinth*, dans le *Journ. of hell. Stud.*, t. XXI.

(2) Remarquons à ce propos que la figure si fréquente qu'on a considérée comme quatre carrés accolés ou encore comme une fenêtre peut toujours se réduire au sous-type de la croix encadrée. Cette remarque multiplie les figures avec croix dont M. Evans n'a réussi à réunir qu'un si petit nombre pour sa

soutenir qu'ils nous révèlent deux cultes associés, un couple de puissances divines. Mais on peut chercher une explication plus simple : y voir, par exemple, la marque de deux ouvriers qui auraient travaillé ensemble ou successivement, ou bien l'équivalent de deux ou plusieurs lettres qui indiqueraient le rôle de la pierre dans l'édifice, ou toute autre explication d'ordre pratique et architectural (1).

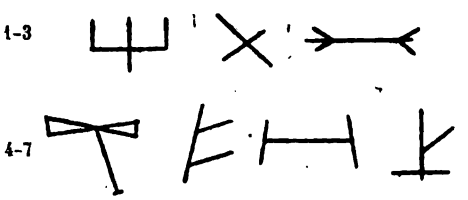
6° Il semble, bien que des statistiques précises puissent seules établir ce fait capital, qu'il y ait certaines parties du palais, ou tout au moins certaines parois, où domine tel ou tel de nos types. Comme les premières fouilles ont mis au jour des parties où dominait la bipenne, on a voulu y voir le palais du Minotaure, le *labyrinthe,* mot qu'on expliquait par la *labrys* carienne, le palais de la « double hache ». L'association de la bipenne et du taureau s'était déjà rencontrée sur des objets recueillis à Mycènes, le labyrinthe était à la fois le palais du taureau et le palais de la double hache. Plus tard, on a exhumé d'autres parties du palais où semblait dominer le trident ; en même temps on remarquait qu'à Phaestos l'étoile était le signe le plus fréquent. Il faudrait donc, si le signe mural prédominant doit être considéré comme symbole religieux, avoir le palais de l'étoile à côté de celui de la double hache, et, dans ce dernier, la partie de la bipenne, la partie du trident, etc. Assurément, les partisans de l'hypothèse religieuse peuvent recourir à pareilles explications. Mais comment feront-ils pour expliquer le mélange des signes sur une même paroi? la différence des

théorie religieuse; mais, en accroissant ce nombre, elle contribue à ruiner la théorie. Si les croix sont si nombreuses et d'un type si peu hiératisé, c'est qu'elles n'avaient pas, sur les pierres murales tout au moins, de signification religieuse.

(1) Selon Milani (*Rendiconti dei Lincei,* 1902), l'assemblage de quatre haches comme celui de quatre piliers serait une représentation du Zeus préhellénique; c'est supposer que le système religieux crétois fut aniconique. Or, on a trouvé en abondance dans les palais crétois des représentations anthropomorphes des divinités : si l'on admet que les empreintes murales étaient des symboles religieux, il faudrait donc admettre que dans la religion crétoise ont coexisté un système aniconique et un système iconique.

bipennes murales et des bipennes à signification religieuse? Celles-ci, en effet, telles qu'on les retrouve sur d'innombrables objets de culte, ont les deux tranchants convexes et, le plus souvent, en arrière de chaque tranchant extérieur comme un second tranchant également convexe, en sorte que la bipenne semble plutôt une quadripenne, signe dont la bizarrerie même a un caractère religieux; en revanche, la bipenne murale consiste simplement en deux triangles isocèles opposés, traversés par une verticale en leur sommet. Les premières ont toute la complexité d'un symbole religieux; les secondes toute la simplicité d'une marque de construction qu'on doit pouvoir graver aisément et promptement.

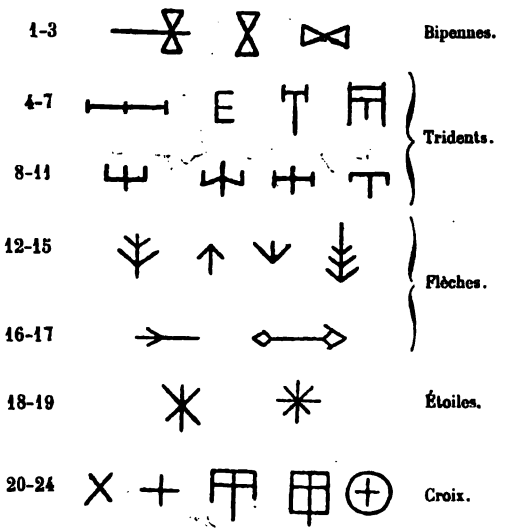
7° Ces signes ne se trouvent pas seulement sur les murailles, mais aussi sur les pierres gravées, gemmes, sceaux, vases, etc. C'est là un des arguments, les meilleurs en apparence, que peuvent invoquer les partisans de l'hypothèse religieuse; si les signes n'ont qu'une valeur architecturale, comment les retrouver ailleurs que dans les constructions? Aussi ne pensons-nous pas que ces signes n'aient qu'une valeur architecturale. Ils ont une valeur propre que nous essayerons d'indiquer, indépendante de leur application. Il faut, en effet, distinguer la valeur propre de la valeur relative, en un mot, du rôle. C'est le *rôle*



Empreintes des talents de Haghia-Triada.

des empreintes murales qui nous semble tout architectural, quelle qu'en soit la valeur propre. Ce que nous ne pouvons admettre, c'est que cette valeur soit religieuse. Comment un signe à valeur religieuse serait-il employé indépendamment de cette valeur? Comment aurait-il ici un rôle architectural, là un rôle économique? Or, c'est ce dernier rôle qu'il joue évidem-

ment sur les sept talents exposés au Musée de Candie et trouvés avec onze autres par M. Halbherr à Haghia-Triada. Dans l'état où on peut les reconstituer, malgré les boursouflures et l'oxydation qui les défigurent, quatre des sept signes qui les décorent peuvent se rapprocher des signes suivants : trident [1], croix [2], flèche [3], bipenne [4]; mais les trois autres [5, 6, 7] ne présentent aucune forme évoquant l'idée d'un symbole religieux. Dans l'hypothèse religieuse, il faudrait donc conclure que, parmi les signes employés sur un même objet, pour une



Caractères des tablettes crétoises, analogues aux empreintes murales.

même fonction, quatre seraient des symboles religieux et trois n'en seraient pas (1). Une telle conséquence condamne la théorie. Il faut donc que nos signes aient eu une valeur qui leur permît de jouer un rôle à la fois sur une dalle et sur un talent. *Cette valeur ne peut avoir été qu'alphabétique.*

(1) Ces talents ont comme poids de 27 à 29 kilos, comme largeur de 40 à 32 cm., comme longueur de 52 à 36 cm., comme épaisseur de 6 à 4 cm. Les signes 7 et 6, 5 et 4 sont associés sur deux des cinq talents, les deux derniers sont précisément un signe symbolique et un signe qu'on ne peut considérer comme tel; ce serait là, en admettant l'explication religieuse, une nouvelle invraisemblance.

On n'a, en effet, qu'à regarder les tablettes écrites de Knossos pour voir qu'elles présentent fréquemment les mêmes cinq signes typiques [1-24] (1), qu'on doit rapprocher de ceux relevés sur les talents, les gemmes, les pierres. Ce rapprochement opéré, la solution apparaît.

Les empreintes murales ne sont pas des signes cultuels, mais des signes d'écriture. Sur les murs de Knossos, leur valeur propre est alphabétique, leur rôle architectural. En même temps, sur des objets de culte, des signes pareils ont pu avoir une signification religieuse. Loin de s'exclure, les deux théories se soutiennent. Chez un peuple primitif, le dieu dont la hache, frappant l'enclume des nuages, est censé produire la foudre, sera représenté par cette hache qui lui servira de symbole pour les besoins du culte. Aussi bien, toute écriture primitive est-elle idéographique, et la hache sera représentée graphiquement par une hache réduite à ses lignes élémentaires. Grâce à son extrême simplicité, ce signe peut passer tel quel de l'idéographisme au syllabisme et au phonétisme. Ainsi, en Égypte, où toutes les phases de l'évolution de l'alphabet sont plus nettement marquées que partout ailleurs, le bœuf peut être ici symbole divin et représenter Apis, là, symbole alphabétique et représenter la syllabe Q A. De même, la bipenne peut avoir sur le moule en stéatite de Siteia (2) une signification religieuse et, sur les murs de Knossos, une signification alphabétique. Bien plus, sur telle partie du palais qui semble avoir eu une fonction religieuse, sur un trône ou sur un pilier, — si l'on admet que ces cultes fussent en usage chez le vicaire du dieu de la double hache (3), — la bipenne peut avoir été attribut et symbole

(1) Tous ces signes proviennent des tablettes de Knossos. Seul 9 est emprunté aux trouvailles de Phaestos, *Monum. dei Lincei*, 1903, pl. IV. Les types si caractéristiques (21, 24) sont donnés dans la même planche IV par Halbherr et par Evans dans son Report, 1899-1900, pl. II, et 1902-1903, fig. 27 *b*. C'est dans cette dernière figure que se trouve aussi le type le plus pur du trident [8].

(2) Ἐφημερὶς ἀρχαιολογική, 1900, pl. 4.

(3) Voir : S. Reinach, *La Crète avant l'histoire*, *Anthropologie*, janvier 1902, septembre 1904 et G. Karo, *Altkretische Kultstätten* dans *Archiv f. Religionswissenschaft*, 1904.

divin, tandis que partout ailleurs elle n'a rien de religieux. Telle marque, comme la bipenne ou comme la croix, peut avoir été plus employée que d'autres comme marque conventionnelle et pratique, parce que, symbole religieux en même temps que signe alphabétique, elle se trouvait plus fréquemment sous les yeux des artisans illettrés. C'est ainsi que pour les illettrés du moyen âge et encore de nos jours, la croix qu'ils emploient en guise de signature n'est pas un signe cultuel ; mais c'est parce qu'il est le plus répandu des signes cultuels, qu'il leur vient tout naturellement à l'esprit et à la main, sans qu'ils se rendent compte de sa signification symbolique. Ainsi, de la présence sur une pierre d'église byzantine de la croix grecque, comme marque de tâcheron, on peut conclure que l'artisan qui l'a tracée connaissait le culte de la croix; mais cette croix elle-même n'en a pas moins un rôle simplement architectural. De même, si l'on trouve la croix sur les murs des édifices Égéo-crétois en même temps que sur des objets de culte, on pourra en conclure que la croix était un signe cultuel pour les Égéo-crétois, mais non point qu'elle eût seulement cette signification religieuse.

Il importe de distinguer les trois éléments du problème : 1° quelle était l'origine des signes employés comme empreintes murales? 2° quelle en était la valeur au moment où on les employait? 3° quel était le rôle qu'on leur faisait jouer?

A cette dernière question la réponse est aisée. Les différents ouvriers employés à la construction avaient besoin de marquer l'emplacement et la fonction d'une pierre par un signe conventionnel (ainsi s'explique que, en général, les pierres d'une même paroi portent la même empreinte) ; ils pouvaient aussi se servir de ce signe pour marquer une pierre ou un groupe de pierres dont le travail devait être payé soit à un ouvrier, soit à l'équipe dont il faisait partie. Chaque équipe ou chaque ouvrier peut avoir eu sa marque particulière, empruntée soit au symbolisme religieux, soit à l'alphabet, soit à l'un et l'autre. Les cinq types que nous avons distingués peuvent avoir servi à

l'un de ces usages, qui n'ont certainement rien de symbolique ni de religieux.

La question d'origine, qui revient à la question d'origine de tous les idéogrammes, ne peut être examinée ici. Disons seulement que les noms que nous avons donnés à nos cinq types n'ont d'autre prétention que d'être ceux qui conviennent le mieux aux idées qu'ils évoquent actuellement. Ces idées actuelles n'ont sans doute pas été celles auxquelles ils répondaient à l'origine. La bipenne a pu représenter dès l'origine cette hache, qui a été le premier instrument de la civilisation; mais d'autres idéogrammes, représentant originellement soit des bras croisés avec doigts ouverts, soit une tête de bœuf, ont pu venir se mêler à l'idéogramme qui représentait la double hache (1) : il a pu y avoir confusion et fusion dans le passage de l'idéographisme au syllabisme; un seul signe alphabétique a pu être l'aboutissant d'idéogrammes très différents de sens, quoique très semblables de forme. Ainsi certains spécimens de trident [7, 8] rappellent plutôt le sistre primitif tel qu'on le trouve sur la coupe dite des moissonneurs (Phaestos); certains spécimens de flèches [6-10] semblent bien plutôt avoir une provenance végétale, représenter une branche d'arbres, une fleur. Quant à la swastika, on sait qu'on a déjà proposé bien des théories pour rattacher ce signe à un type animal (cigogne, argonaute, poule) ou végétal (branches ou bâtons croisés) (2).

Quelle que soit l'origine de ces signes, il nous semble qu'au moment où on les employait sur les murs, leur valeur était alphabétique. Nous en venons donc à examiner quelle était la

(1) Ces deux idées, qui viennent tout naturellement en présence de certains spécimens de bipennes, ont été indiquées, la première par M. Evans, dans ses *Cretan Pictographs*, qui y voit un idéogramme ayant pu signifier *dix*, à cause des dix doigts des mains ouvertes, la seconde par M. Noack, dans son étude sur le palais homérique. On trouvera dans le tableau de la page 76 un spécimen [3] du type de bipennes sur lequel s'appuie l'hypothèse de M. Noack, et un spécimen [4] du type invoqué par M. Evans. C'est au tableau de tridents et de flèches de la p. 77 que renvoient les numéros suivants.

(2) V. S. Reinach, *Rev. Arch.*, 1902, I, 372-86, et Fréd. Houssay, *Revue des Idées*, avril 1904.

valeur alphabétique particulière de chacun des signes muraux (1). Sans doute, l'intelligence des signes muraux semble postuler celle des signes des tablettes. Tant que ceux-ci n'auront pu être expliqués, ceux-là ne le pourront être davantage. Néanmoins, on peut se demander si les signes des murs ne pourraient servir à l'explication de ceux des tablettes; si ces signes, au lieu de nous fournir des indications sur la mythologie des Crétois du xve siècle, ne pourraient du moins nous renseigner sur leur écriture.

En admettant que les ouvriers aient employé des lettres pour quelqu'un des usages pratiques que nous avons indiqués, il n'est pas vraisemblable qu'ils les aient choisies au hasard.

1° Ils pouvaient employer les premiers chiffres de leur système de numération. Mais si leur système était le système décimal de traits parallèles et juxtaposés que M. Evans croit avoir découvert, on voit, sans plus insister, que nos signes muraux n'ont avec lui aucun rapport. Si M. Evans se trompe et si leurs chiffres pouvaient être, comme dans la Grèce classique, représentés par leurs lettres dans le même ordre de succession, la question sera résolue en même temps que la suivante.

2° Ont-ils employé les premières lettres de leur alphabet? Sans doute cela est possible, mais on peut se demander pourquoi ils se seraient limités à cinq types de signes.

3° Les signes employés par eux sont-ils les voyelles de leur alphabet, ou, — si leur écriture était syllabique comme l'écriture cypriote, — les cinq groupes syllabiques les plus usuels, ou encore ceux qu'on formait pour représenter la combinaison

(1) C'est vers cette interprétation alphabétique que semble pencher M. Pigorini (*Bullet. di Paletnologia Italiana*, 1904, p. 91) pour les signes incisés dans les trois « pains » de cuivre de Serra-Ilixi (musée de Cagliari) si semblables aux signes 2, 4, 7 des talents de Haghia-Triada. A Enkomi, M. Murray (*Excavations at Cyprus*, p. 40, Londres, 1900) a signalé, sur un talent, une empreinte où il voit le signe *Si* de l'alphabet cypriote. N'est-ce pas là tout au moins une présomption en faveur de la théorie alphabétique?

d'une même consonne usuelle avec 5 voyelles différentes (par exemple, KA, KÉ, KI, KO, KOU)?

Quoi qu'il en soit de ce dernier groupe d'hypothèses, qui semble le plus vraisemblable (1), on peut, je crois, considérer comme acquis deux résultats : 1° un fait négatif : les empreintes murales de Knossos ne sont pas des symboles religieux ; 2° un fait positif : ce sont des signes répondant à un but pratique et architectural et probablement de provenance graphique. Quant à l'interprétation de ces signes supposés graphiques, elle reste naturellement à déterminer. Mais les rapprochements avec les signes semblables des alphabets mieux connus pourront contribuer à la faciliter.

Nous n'avons pu ici qu'esquisser la solution du problème. Pour arriver à le résoudre complètement, il faudra procéder à des statistiques détaillées, donnant, pour chaque partie de l'édifice, le nombre, la forme, la position relative, les groupements divers, etc. des signes muraux. Il faudra faire rentrer dans ces dénombrements, non seulement les monuments de l'architecture égéenne de Crète, mais ceux de toutes les autres architectures égéennes, étudier les monuments si nombreux à Rhodes, à Chypre, etc., où l'on retrouve des signes semblables. Ou bien ces signes ont été gravés par les ouvriers modernes qui ont construit ces édifices, et il faudra savoir la signification qu'ils y attachaient et comment ces signes se sont transmis jusqu'à eux, ou bien les pierres qui les portent proviennent des ruines antiques du voisinage. Mais comme ces ruines ne remontent pas à l'époque égéenne, il faudra examiner comment la connaissance de ces signes s'est transmise aux ouvriers de la Grèce classique. Peut-être trouvera-t-on qu'à travers les siècles

(1) Comparez les signes reproduits dans cet article avec les hiéroglyphes hittites et les syllabaires cypriote et lycien ainsi qu'avec toute la série des alphabets asianiques qui en dérivent (Berger, *Histoire de l'alphabet*, p. 89, 146). On voit aisément combien l'identité ou, tout au moins, les rapports étroits que nous proposons de reconnaître entre les empreintes des murs de Knossos et les signes des tablettes crétoises, pourront, si l'on admet notre dernière hypothèse, faciliter le déchiffrement de l'Égéo-crétois.

les idéogrammes égéens se sont perpétués comme marques de tâcheron (1).

Adolphe J. Reinach.

(1) M. R. Herzog (*Man*, 1901, p. 66) a déjà émis l'hypothèse que l'écriture égéenne aurait survécu, comme à l'état fossile, dans les corporations des tailleurs de pierres. Comme les maçons de la Grèce classique (et les Phéniciens) se servaient des lettres de leur alphabet en guise de memento soit pour l'appareillage, soit surtout pour le salaire, et que les modernes en font autant, il est vraisemblable que cet usage remonte à la plus haute antiquité et que les maçons grecs l'avaient reçu de leurs maîtres crétois. Ils auraient si fidèlement conservé leur tradition qu'on peut retrouver à côté de blocs à caractères ioniens du IVe siècle avant J.-C., d'autres blocs à caractères égéo-crétois, peut-être de valeur alphabétique correspondante.

THE BRITISH ACADEMY

Minos the Destroyer rather than the Creator of the so-called 'Minoan' Culture of Cnossus

By

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Fellow of the Academy

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MINOS THE DESTROYER RATHER THAN THE CREATOR OF THE SO-CALLED 'MINOAN' CULTURE OF CNOSSUS

By WILLIAM RIDGEWAY

FELLOW OF THE ACADEMY

Read May 26, 1909

In 1896 the present writer ventured to suggest that Cnossus would eventually prove to be a great seat of the Aegean culture because of its extraordinary prominence in legendary history as the seat of Minos and from the fact that already on the spot were known the ruins of a prehistoric palace, and that pottery and gems of a style similar to those found at Mycenae had also been found on the site. The old school of Greek archaeologists and historians laughed at him for his credulity in believing that any such person as Minos had ever existed. But notwithstanding this, in 1901 he repeated the same belief—that Cnossus would prove to be one of the chief *foci* of the Aegean culture. Before his book was printed off, Dr. A. J. Evans had already made the first of those memorable discoveries which will always be associated with his name. Since then Minos has rapidly grown in popularity. Dr. Evans found a great hall with a very remarkable chair at one end. This great chamber with its stately throne he considers to be the hall and throne where the real Minos sat in judgement, and he holds that owing to the fame of this great presence-chamber and its chair Minos is represented in the *Odyssey* as judge of the Dead. So far all was well.

But Dr. Evans, not unnaturally, was carried away by the splendid discoveries which had rewarded his perseverance and sagacity. Unfortunately he was not content to describe the site and remains at Cnossus by a colourless scientific nomenclature and without any question-begging epithet. He applied the term Minoan not only to the culture found at Cnossus and to similar remains found elsewhere

in Crete, but he even desired to extend it to the whole of the Bronze Age culture of the Aegean. In this he was immediately followed by almost all other British Archaeologists, and also by the Americans and Italians. At the Cambridge meeting of the British Association in 1904, I protested against the use of the term 'Minoan' by my brilliant friend, and other scholars have since argued against its employment. But protest was in vain. Professor J. L. Myres, Professor Burrows, and others of the same school, not only persisted in applying the term to the Aegean culture, but have extended its use to a greater degree than Dr. Evans himself has ever done. Thus they not only now speak of the 'Minoan language' when treating of the pictographic and linear writings found at Cnossus, but they have even gone the length of making it into an ethnic, speaking of the whole population of Crete and the Greek islands as 'Minoans'. They avowedly wish to supplant by this term the historical names of Pelasgians and Achaeans, whilst Professor Burrows would fain wipe out the Eteocretans from the early history of Crete and apparently would erase the Carians from the annals of the Aegean. Professor Burrows, when writing of Pelasgians and Achaeans, maintains 'that what we want at the present moment is to clear the air of them: There is a danger that facts are being obscured by names',[1] and he adds a threat that 'those who do not adopt the term "Minoan" will find that they have dropped behind'. With his remark that 'facts are being obscured by names', I am in hearty accord, but it never occurred to Professor Burrows that it was by the use of the name 'Minoan' that the facts of early Aegean history are at the present time being not only obscured but distorted. Professor J. L. Myres[2] has taken up much the same position as Professor Burrows.[3] Yet these gentlemen are not very consistent, as one might cite various passages from their writings where they relapse into the ancient nomenclature. Thus, although it is said to be foolish for me to speak of the Achaeans as a real people and undoubted factors in early Greek ethnology, yet Professor Burrows does not hesitate, when speaking of certain tribes called Thuirsha and Akaiuasha (or Aqayuasha) in an Egyptian inscription who appear to have invaded Egypt in the reign of Merenptah (1234–1214 B. C.), to say that the names of these invading tribes 'can with scarcely a doubt be equated with Achaeans, Teucri, and Danai'.[4] There is indeed a high probability that the Akaiuasha of the Egyptian inscription were the Achaeans. But why is it probable? Is

[1] *Discoveries in Crete*, p. 203. [2] Op. cit., p. 44.
[3] *The Year's Work in Classical Studies*, 1907, p. 18.
[4] Op. cit., p. 123.

it because an Egyptologist made a clever guess, and Professor Burrows believes that he is right? Is it not rather because the clever Egyptologist recognized in the inscription a name familiar through all Greek history? The whole strength of his suggestion lies in the historical facts, that there was a Roman province called Achaia, that this province took its name from an ancient division of Peloponnesus called Achaia, which in Macedonian times formed the famous Achaean League, that this Achaia had been so called from the time of the Dorian conquest when the remnants of a people called Achaeans, who had lived and reigned for several centuries in Argolis and Laconia, took refuge there, and that all Greek tradition tells us that these were the Achaeans who are represented in the Homeric poems as the lords of Thessaly, Argolis, Laconia, Elis, and the overlords of the rest of Greece, as having settlements in Crete, and making descents upon Egypt from that island. But this is the very evidence of which Professor Burrows wants to 'clear the air', and thus our only reason for believing in Homer's Achaeans for the future must be founded on the resemblance of the word Akaiuasha in the Egyptian inscription to Achaioi—not a very solid basis for an historical belief.

But it is typical of the school to which Professor Burrows and Professor Myres belong to invent new ethnics, when by their unscientific speculations they have involved themselves in inextricable difficulties. Thus Professor Burrows is an ardent believer in the 'Celticans', who have been invented in order to defend the untenable position that the aboriginal people of the British Isles were non-Aryans. These aborigines had to be changed miraculously in a couple of centuries into a Gaelic people, not only using an Aryan vocabulary, but with an accurate use of the Aryan tense system. I have dealt with the 'Celticans' in another publication of the *Academy*,[1] and I now propose to show that the 'Minoans' had as little reality in fact and history as the 'Celticans'.

Let us listen to history and tradition and hear what they have to tell us. Their voices may sometimes be thin and piping through extreme old age, but yet year after year the confirmation of their truthfulness rises up out of the very ground. Quite recently Professor Lecoq has shown that the tradition of Ptolemy the geographer respecting certain peoples in Eastern Turkestan is amply substantiated, not only by paintings, but by records written in a language of the West European type.

In our present investigation we shall commence with the archaeo-

[1] 'Who were the Romans?'

logical evidence and then compare it with the literary traditions. Let us turn to Dr. Evans's splendid discoveries at Cnossus.

The Neolithic Remains. The earliest evidence of human occupation is a large deposit of Neolithic age. From its thickness Dr. Evans computed that the Stone Age people must have dwelt on the site for over 10,000 years. But, as geologists well know, all computations of time based on such data are precarious, whilst a later discovery made by Dr. Evans himself proves that we must be cautious in assuming that the thickness of the Neolithic deposit is wholly due to gradual accumulation in the Neolithic period. Dr. Evans originally believed that the ground under the 'Grand staircase' was a solid accumulation during a long period, but his investigations in 1907 convinced him that this great mass really consisted of made-up earth. If, therefore, at one place under the palace the Neolithic stratum is not the result altogether of slow accretion, but consists of materials brought together by some builder of a later date, we must suspend our judgement respecting the length of the period during which the site was inhabited by men of the Stone Age, although no one can doubt that this may have been for a very long period.

The Minoan Periods. All the strata above the purely Neolithic Dr. Evans terms *Minoan*. Of this Minoan period, which he believes to have extended over several thousand years, he makes three main divisions:—*Early Minoan*, *Middle Minoan*, and *Late Minoan*. Each of these he again subdivides into three periods, thus making nine in all in fanciful adjustment to the nine years which Minos had attained when he became king.

By the simple substitution of *Cnossus* for *Minoan* Dr. Evans's chronology can be retained and at the same time made scientific in nomenclature. But for the present I shall retain his own terminology in summarizing the characteristics of the various periods.

Early Minoan I. This deposit reaches a depth of 17 feet. In it continues the black hand-polished pottery of the Neolithic Age, though the effect produced in that period by incised lines with a white filling is now obtained by paint laid on the flat. Dr. Evans proposes to synchronise this period with the first four Egyptian dynasties for reasons soon to be stated. But at present it is impossible to date with any accuracy the early period of Egyptian history. Lepsius placed the beginning of the First Dynasty at 3892 B.C., and this Evans has adopted; Professor Meyer brings the date down to 3315 B.C.; Professor Petrie formerly placed it at 4777 B.C., but now has pushed it back to 5510 B.C., and sets the

beginning of the Fourth Dynasty at 4731 B.C. For the synchronism of Early Minoan I with the early Egyptian period Evans relies on the following evidence:—(1) Petrie[1] thinks that the black hand-burnished pottery is 'indistinguishable in colour, burnish, and general appearance' from certain pottery found by himself in the tombs of Dynasty I at Abydos, and he suggests that this pottery may have been imported from Crete. (2) There are three stone vessels—syenite, diorite, and liparite—which are like well-known Egyptian types, and are therefore held to be either importations from Egypt to Crete, or copies from early Egyptian prototypes. But it has been pointed out[2] that there is no direct evidence that these three stone vessels were found in Early Minoan deposits at all. The syenite vase is placed by Dr. Mackenzie, Dr. Evans's assistant, in Middle Minoan I; the diorite vessel was found (1902) 'among some débris from the south wall' of a store closet that contained a number of vases of Middle Minoan III.[3] The liparite bowl was found the same year in 'disturbed earth' on the east slope near some store-rooms containing Middle Minoan pottery.[4] It is further held that (*a*) vessels of these kinds may have continued to be manufactured in Egypt for a very long time, and (*b*) that even if the examples were certainly of the earliest Egyptian period, owing to their durability they might very well be found in deposits very many centuries later than the date of their own manufacture.

Early Minoan II. To this period Evans assigns vases, which are characterized by a great freedom of design and variety of shape. In addition to straight lines simple curves are now used in decoration, and vessels with long horizontal spouts or 'beaks' are coming into use.

Early Minoan III. It is in this period that the Cyclades seem first to come into close connexion with Crete. Hitherto the Cycladic culture was apparently ahead of that of Cnossus and the rest of Crete. Representations of the human form of a type even more rude than the marble figurines of Amorgos have been found in Crete in the *tholos* at Hagia Triada along with very short triangular copper daggers, vases of the incised ware of the Neolithic period, and seals of a conical or cylinder shape. But it is in this period that marble figurines of the regular flat technique, so common in Melos, Amorgos, Paros, and other islands, make their appearance in Crete. With this epoch also are contemporary the beginnings of the First City at

[1] *Method and Aims of Archaeology*, p. 166, Fig. 64.
[2] Burrows, op. cit., pp. 44–5.
[3] *Brit. Sch. Ann.*, vol. viii, pp. 88–9.
[4] Ibid., p. 123, Fig. 74.

Phylakopi in Melos, and the Second City at Troy (though it may have begun earlier and lasted longer).[1]

It is also in this period that Egyptian influence begins to be strongly felt in Crete, for the Cretan seals now show primitive pictographs which are supposed to be derived from the so-called 'button' seals of Egypt.[2] These became common in Egypt under Dynasty VI, the beginning of which is placed by Petrie[3] in 4206 B.C., and by Meyer[4] in 2540 B.C.

Evans places the end of Early Minoan III at about 3000 B.C., and to this period he assigns the beginning of polychrome painting.[5] But here arise doubts. Dr. Mackenzie[6] holds that the beginning of polychrome decoration and the development of a true spiral system cannot be assigned to any period earlier than Middle Minoan I, and to this later epoch he assigns three important early deposits of the palace at Cnossus, which Dr. Evans regarded (1904) as the 'best evidence' for the culture of Early Minoan III.[7] Incised pottery of the Neolithic type is found in Early Minoan II and III, either as a survival or a revival, more probably the former.

Middle Minoan I. To this period, as we have just seen, Dr. Mackenzie assigns the beginnings of polychrome painting and the development of the true spiral. At Cnossos, side by side with monochrome vases with the design in lustrous black varnish on buff clay slip, occurs lustrous polychrome decoration in white, yellow, orange, red, and crimson, on a lustrous black varnished ground.[8]

Along with the spiral decoration a naturalistic tendency now appears; a fragment of pottery shows three Cretan wild goats and behind them an object like a beetle. A pictographic script likewise distinguishes this period. Although of course there must have been habitations of some kind on the site of Cnossus during this and the previous periods, no traces of such have as yet been discovered. The most that can be said is that there are some pits, which may

[1] Dawkins, *Brit. Sch. Ann.*, p. 195; Tod, ibid., ix, p. 342; Burrows, op. cit., p. 50.

[2] Evans, *Essai de Classification des Époques de la Civilisation Minoïenne*, p. 7; *Brit. Sch. Ann.*, viii, p. 121.

[3] *Sinai* (1906), p. 175.

[4] *Abhandl. d. Königl. Preuss. Akademie*, 1904, p. 178.

[5] *Essai de Classification, &c.*, p. 6.

[6] *Jour. Hell. Stud.*, vol. xxvi, pp. 244–6.

[7] *Brit. Sch. Ann.*, vol. x, p. 20.

[8] *Brit. Sch. Ann.*, vol. xi, Plate I; *Jour. Hell. Stud.*, vol. xxvi, Plates VII, IX, X, XI.

have belonged to some large dwelling. There are distinct signs that this period was brought to a close by a general catastrophe.

Middle Minoan II. In this period there are undoubted traces of what may be called the early palace. From the pits and the basement, which are assigned to this period, it would appear that the walls were of small rough masonry unlike the splendid and regular buildings of later days.[1] Though there are remains, the character of its plan and construction have to be inferred from the remains of the splendid palace at Phaestus, which from the evidence of vases is proved to be contemporary. It is from the floor-deposits occurring in almost all parts of the site that we infer that Cnossus at this time was not inferior to its sister city. In the pottery polychrome is now the rule, monochrome being only found in the common ware. This is the period of the Kamares ware in its highest development, with its thin fabric, elegant designs, and delicate colouring, exemplified in its cups and bowls.[2] Some of these have designs stamped in low relief.[3] The patterns are usually geometric with zigzags, crosses, spirals, concentric and semi-circles, whilst large surfaces are covered with plain dots. Designs from plants are rare, and when they do occur they are very conventional. This period, like Middle Minoan I, came to an end with a general catastrophe. In several parts of the palace large numbers of vases of the best polychrome style were found lying together on a floor in position and practically undamaged. Between them and the remains of the next period intervene a considerable depth of earth.[4]

Middle Minoan III. To this period belongs the main plan of the palace, as it now survives, especially its western portion, though changes in and additions to this part were made even in a later period. The temple Repositories west of the Central Court and a number of apartments on its north-east side were built in Middle Minoan III, but were covered up in the next period. The vases display a beautiful naturalism, as evidenced by a little boy painted in blue, gathering white crocuses in a field, and arranging them in a vase. Even his flesh is painted blue.[5] There are also delicate lily patterns in white on lilac or mauve ground, but polychrome is being

[1] *Brit. Sch. Ann.*, vol. ix, p. 17; Burrows, op. cit., p. 58.

[2] Ibid., vol. viii (1901–2), p. 120, Figs. 70–1; *Jour. Hell. Stud.*, vol. xxiii, Plates V, VI; vol. xxvi, Plate VIII.

[3] *Brit. Sch. Ann.*, vol. viii, p. 118; Hogarth and Welch, *Jour. Hell. Stud.*, vol. xxi, pp. 81–3; Mackenzie, ibid., vol. xxiii, pp. 172–4; xxvi, pp. 254–7; Burrows, op. cit., p. 60.

[4] *Brit. Sch. Ann.*, vol. x, p. 16.

[5] Evans, *Brit. Sch. Ann.*, vol. vi, p. 45; Burrows, op. cit., p. 62.

superseded by a naturalism. In the temple Repositories vases imitating prototypes of a different material occur. These vessels were imports from Melos, which from this time onwards shows a close contact with Cnossus. These vessels are reminiscent of skin prototypes.[1] There are also vessels of native manufacture in serpentine imitating leather or wicker-work[2] and also knobbed and roped jars of large size, the decoration of which represented the cording used in their transport.[3]

In this epoch reigned the potentate who built for himself the fine tomb at Isopata on the hill that looks upon the sea. Middle Minoan III, like its predecessors, ended in a general catastrophe.

Late Minoan I. This is the period of many masterpieces of art. The royal draught-board found in the palace probably belongs to this age. Bronze swords now succeed to the daggers (probably of copper), the blades of which have been gradually lengthening during the Middle Minoan period.[4] Naturalism still prevails in the pottery in flower and shell designs. The white on dark of the last period has now yielded to a dark on light and brown or red designs on a ground varying from buff to a yellowish pink. The linear writing of Class A is now in general use. To this period belongs the villa at Hagia Triada, with steatite vases, the fresco with a cat and bird, and the sarcophagus with a sacrificial procession. Zakro also supplies some good examples of the pottery of this period.[5] There are designs of reeds or grasses, such as are found on graceful pots from Phylakopi in Melos.[6] Phylakopi shows other close connexions with the art of this epoch as it did with that of the previous period, and the latest elements in its second city are contemporary. The Shaft-graves at Mycenae apparently begin in this period and continue into the next.

Late Minoan II. This is the great architectural period of Cnossus. To it belongs the Throne Room and the Basilica Hall of the Royal Villa, and the great fresco wall paintings, the most notable of which are the Cupbearer and the groups of spectators watching the games. In this period also there was a lavish decoration by means of stone carvings or painted plaster. The plaster work presents high reliefs,

[1] *Brit. Sch. Ann.*, vol. ix, Fig. 2, p. 50, Fig. 25; *Phylakopi*, nos. 1–5, Edgar, pp. 119, 120, 135; Mackenzie, pp. 259–63, Plate XXI, nos. 1–5.

[2] Ibid., vol. vii, p. 666.

[3] Ibid., vol. viii, p. 11, Fig. 5; ix, p. 27; x, p. 12, Fig. 3; Burrows, op. cit., p. 63.

[4] Evans, *Essai, &c.*, p. 9; *Prehistoric Tombs*, p. 105.

[5] *Jour. Hell. Stud.*, vol. xxii, Plate XII, no. 1.

[6] *Phylakopi*, Plate XIX, nos. 9, 10; Burrows, op. cit., p. 85.

such as that of the Bull's Head, and low reliefs, as seen in the king with plumes, as well as the ordinary flat painted surfaces. The frescoes were framed with elaborate designs—zigzags, lozenge, fish-scale rosettes, and spirals. The decoration of the contemporary pottery reflects the ornament of the architecture. The naturalism of the vases coincides with the same feature in the architectural designs. All traces of polychrome painting or of monochrome light design on a dark ground have now departed. The fine 'Mycenaean' of dark upon light now dominates. The design being painted in a lustrous glaze ranging from red brown to black, the ground being a hand-polished buff slip on the terra-cotta body of the vase.[1] Links between Crete and the Greek mainland now appear, as in a fine vase some two feet high with a conventional flower design.[2] Mr. J. H. Marshall,[3] now Director-General of the Archaeological Survey of India, by piecing together fragments of vessels found in chamber tombs at Mycenae and Vaphio cleverly pointed out a common origin for them and the Cnossian vase. The weapons also show a point of contact. Thus a sword-hilt with a pommel of white faience[4] seems to belong to the same type of sword as the fragment of a crystal hilt found in the Palace at Cnossus, and the splendid ivory and agate pommels found in some of the earliest tombs in the Zafer Papoura cemetery.[5]

The well-known false-necked amphorae, so characteristic of 'Mycenaean' sites both on the mainland and elsewhere, and which have been found in early strata both at Gournia and Hagia Triada in Crete have not been found in the Palace at Cnossus, save for a few fragments and one whole vase from the Royal Villa.[6] Yet in the next period it suddenly becomes the prevailing type at Cnossus. These vases, however, appear on the clay tablets, supposed to be inventories, found within the Palace, whilst some fine examples of the vases themselves have been found in the earliest tombs at Zafer Papoura. Their decoration seems copied from metal-work and resembles that of bronze vessels of the same period.[7] In order to explain the absence of the false-necked amphorae in the Palace it is

[1] Mackenzie, *Jour. Hell. Stud.*, xxiii, p. 194; Evans, *Preh. Tombs*, p. 156, Fig. 144; Burrows, op. cit., p. 86.

[2] Ibid., p. 158, Fig. 148, Plate CI.

[3] *Jour. Hell. Stud.*, xxiv, Plates XIII, XXIII, p. 192, Fig. 10; *Brit. Sch. Ann.*, vii, p. 51.

[4] R. C. Bosanquet, *Jour. Hell. Stud.*, vol. xxiv, pp. 322–4.

[5] Evans, *Preh. Tombs*, p. 110, Figs. 58–9, 66, 110, 112, pp. 56–7, 62, 106, 110.

[6] *Brit. Sch. Ann.*, vol. ix, p. 173, Figs. 87a, 87b; Burrows, op. cit., p. 89.

[7] Evans, *Preh. Tombs*, pp. 121–2, Figs. 115–16.

suggested that from Middle Minoan III to Late Minoan II 'false-necked vases may at Knossos have been almost confined to metal-work, and their absence therefore may be due to the looting that has caused the disappearance of practically all metal objects from the Palace'.[1]

The conventional element seen in the designs of the 'Palace Style' distinguishes also the contemporary products in bronze and stone work. One splendid bronze vessel bears a close resemblance to a metal ewer depicted on the tomb of Sen-Mut, an important Egyptian who lived in the XVIIIth Dynasty (*infra* p. 11), and, what is of special interest, it is presented by a Keftian.[2] The stone work of this period is especially striking, huge amphorae of veined limestone, a triton-shell carved out of alabaster, the head of a lioness with jasper eyes, a large weight of purple gypsum (64 pounds) carved with the tentacles of an octopus, and a tall lamp pedestal with ornaments of palmettes and lotus-buds are amongst the most important. The linear script of this period, termed Class B by Dr. Evans, shows an advance on that in use in the previous epoch. 'It was a civilization which was still growing and developing that was given a sudden and crushing blow by the sack of Knossos.' There is no sign of decadence to be seen in this great epoch. It is suddenly cut short by a grand catastrophe.

What, then, is the date of this sudden disaster? The date of the next period (Late Minoan III) can be ascertained with a high degree of probability from the collateral Egyptian evidence. Evans places Late Minoan I between 1800 B.C. and 1600 B.C., but Professor Burrows[3] argues in favour of a slightly later date at both ends, holding that it is unlikely that Late Minoan I 'ended till the XVIIIth Dynasty had already well begun'.

'This would suit excellently,' argues he, 'for the beginning of Late Minoan II.'

Egypt affords us the means of a good general date for Late Minoan II, for that period almost certainly synchronizes with the frescoes on two well-known tombs at Thebes—those of Sen-Mut and Rekhmara. In the paintings on these monuments the 'Keftians' and the men 'of the isles in the midst of the sea' are represented as bringing gifts or tribute to the Egyptian king.[4] There seems to be a high probability that the Keftiu represent the Bronze Age people of Crete and

[1] Burrows, op. cit., p. 90.
[2] Burrows, op. cit., p. 90, who cites various references.
[3] Op. cit., p. 93.
[4] Breasted, *Ancient Records*, &c., vol. ii, p. 295, no. 761.

other parts of the Aegean. (1) Their physical appearance and dress differs essentially from that of the other tribute-bringers—Egyptians, Semites, and other Asiatics—whilst they correspond very well to the physique and costume of the people depicted on works of art at Cnossus.[1] (2) The vessels also which they bear, in shape and style, resemble those of the great Palace period of Cnossus. (3) Moreover, the ox-heads and metal ingots which they are supposed to carry seem to fall in well with the supposed monetary system of Cnossus.[2]

What are the dates of the two Egyptian tombs? Sen-Mut was the architect of queen Hatshepsut, daughter of Thothmes I, and wife of at least one of his successors. Rekhmara was the prime minister of Thothmes III, and is now known to have been still living in the reign of Amenhotep II. All now turns on the date of Thothmes III, Amenhotep II, and Amenhotep III. Dr. Budge places the beginning of the reign of Amenhotep II at about 1500 B.C. But Petrie, Breasted, and the Berlin Egyptologists all place the reign of Thothmes III somewhere about 1500 B.C. to 1450 B.C., and accordingly they place the accession of Amenhotep II in the later year, thus making him live fifty years later than Dr. Budge's date. Petrie and the others make Amenhotep III succeed in 1414 B.C. or in 1411 B.C. The family history of Thothmes I, Thothmes II, Thothmes III, and Hatshepsut is still obscure, but it is held unlikely that she died more than thirty years before the accession of Amenhotep II. If that was in about 1450 B.C., which seems the most likely date, Hatshepsut can hardly have died before 1480 B.C. But as there is no reason for supposing that her architect died before her, Sen-Mut's tomb may very well be considerably later than that date, whilst on the other system it can hardly be earlier than 1530 B.C.

As Rekhmara survived into the reign of Amenhotep II, on Dr. Budge's system, his tomb must be later at least than 1500 B.C., and by the other and more probable chronology later than 1450 B.C. The balance of probabilities is therefore in favour of placing the two tombs between 1500 B.C. and 1440 B.C., that of Rekhmara certainly not being earlier than 1495 B.C. The picture of the Keftians on his tomb must be not earlier than 1495 B.C., and probably not earlier than 1445 B.C. The grand Palace Style was therefore still in full force at this epoch. But Professor Burrows rightly points out that it would be rash to take 1450 B.C. as the lowest limit for the destruction of the Palace of Cnossus. It is argued that the 'Mycenaean'

[1] H. R. Hall, *Brit. Sch. Ann.*, viii, pp. 162–7; x, pp. 154–7.

[2] Dawkins, *Brit. Sch. Ann.*, x, p. 212; H. R. Hall, ibid., vol. viii, p. 171, Fig. 2; x, pp. 154, 156, Figs. 1, 2; Burrows, op. cit., p. 94.

pottery found at Tel-el-Amarna, which belongs to the reign of Amenhotep III (1414 B.C. or 1411 B.C. to 1383 B.C. or 1380 B.C.) and his successor Akhenaten, which belongs therefore to the first half of the fourteenth century (1400 B.C.–1350), shows a marked inferiority to that of Late Minoan II, and accordingly it is urged that an interval must be left for decadence. To this Professor Burrows[1] replies that 'if we agree that the sack of Knossos occurred rather before than after 1400 B.C., we have allowed ample time', and he concludes from these general considerations 'that the great Palace period probably closed before the reign of Amenhotep III had far advanced from its beginning in 1414 or 1411, and certainly closed before Akhenaten came to the throne in 1383 B.C. or 1380 B.C.' This conclusion is really not at variance with that of Dr. Evans[2] himself—that the Palace period 'can hardly be brought down later than the close of the fifteenth century'.

To all the eight periods which succeed the Neolithic deposit Dr. Evans has given the name *Minoan*, as well as to the succeeding epoch, 'Late Minoan III.' Yet there is not the slightest evidence, as we shall soon see, for the existence of a personage named Minos at Cnossus or elsewhere until about 1400 B.C., that is at the close of 'Late Minoan II' and the beginning of 'Late Minoan III'. It is therefore very unhistorical to apply the term *Minoan* to periods which, according to Dr. Evans, go back several thousand years before 'Late Minoan III'. We might just as well apply the term *Victorian* to all English history from the beginning of the Bronze Age down to the present day, describing the period from the end of the Stone Age down to the Norman Conquest as 'Early Victorian', with several subdivisions, the Bronze Age being 'Early Victorian I', the Early Iron Age and Roman period 'Early Victorian II', and the Saxon period 'Early Victorian III'; 'Middle Victorian' would cover the period from the Conquest to Elizabeth, with appropriate subdivisions, whilst 'Late Victorian', with its subdivisions, would comprise the period from Elizabeth to the present time.

Again, though the name of Priam may well be associated with the Sixth City at Troy, no one would dream of describing the earlier strata at Troy as 'Priamean I', 'Priamean II', &c., whilst it would be just as unscientific to apply the term '*Proetean* I', II, or III, &c., to the various strata lately brought to light by the German excavations at Tiryns, because we know from tradition that Proetus was a powerful chieftain at Tiryns towards the close of the Bronze Age. Dr. Evans, in giving the name *Minoan* to the culture revealed at

[1] Op. cit., p. 95.

[2] *Preh. Tombs*, p. 131.

Cnossus and elsewhere in Crete in consequence of the close relations between Minos and Cnossus in Greek legend, has committed the same mistake as that made by Dr. Schliemann in assigning to the Homeric period the Bronze Age culture which he found at Mycenae, because in Greek story Agamemnon was the grand name associated with Mycenae. Fortunately, however, Schliemann did not term the culture which he first unveiled *Agamemnonian*, but was content to term it *Mycenaean*, from the name of the site. It is, therefore, to be hoped that Dr. Evans will eventually adopt *Cnossian*, and abandon *Minoan*. By the use of a topographical rather than a personal term we may speak of 'Early Cnossus' (or Cnossian), 'Middle Cnossus', and 'Late Cnossus', just as we now do of 'Troy I', II, III, &c., and 'Phylakopi I', II, III.

Late Minoan III. The destruction of Cnossus, and not improbably of Phaestus and Hagia Triada also at the same time, and the change to a new culture, a change not merely temporary but permanent, which characterizes Late Minoan III, point unequivocally to some political upheaval of more than ordinary importance. It is difficult to conceive that the great lord of the splendid palace at Cnossus in Late Minoan II had been overthrown merely by some petty revolt or combination of his vassal cities. Such a mishap would not have altered for ever the essential character of the culture not only at Cnossus but practically all over Crete. The sack of Cnossus at this epoch left indelible marks, for it heralds the advent of the Early Iron Age, and with iron the coming of the other typical features of that culture which had made its way down into Greece from Central Europe. These comprise the style of decoration known as Geometric, the use of broches for fastening the garments, the round shield, and the practice of cremating the dead. Was there any great potentate whose shadowy form still looms large in written tradition and whose name and fame still echo down the long aisles of time who might have been the cause of this great political upheaval? But it is not enough merely to find a great name, for in order to solve our riddle the date when such a person flourished must synchronize with the period within which falls the sack of Cnossus, that is, some time a little before 1400 B. C. Moreover, in view of the revolution effected in the culture not only of Cnossus, but of all Crete, such a conqueror ought to have come from some foreign land, and not have been merely a native prince, for if the conqueror had himself been a Cretan, there would have been no reason for the transition to an essentially new form of culture.

Let us turn to Minos, the very monarch whose name has been

given to all the eight periods which preceded the sack of the great Palace. The Parian Chronicle[1] gives two sovereigns of this name, as also do Diodorus[2] and Plutarch.[3] According to the Chronicle Minos I flourished 1406 B. C. He was the son of Zeus and Europa, and he married Ithonae, by whom he had a son Lycastes, who by one account was the father of Minos II. Minos II married Pasiphae, daughter of Helius and Perseis, by whom he had Glaucus, Deucalion, Phaedra, and Ariadne. Daedalus the Athenian artist worked for him at Cnossus, and when he fled to Sicily Minos pursued him and was himself killed there by Cocalus or the daughter of that king thirty-five years before the Trojan war. But we naturally turn to the Homeric poems for the oldest traditions respecting the name of Minos. If I am not mistaken, we shall find here also distinct evidence for two kings of the same name. In *Iliad*, xiv. 321–2 Zeus recounts how he 'loved Europa, the famed daughter of Phoenix, who bore me Minos and godlike Radamanthus'. This is plainly Minos I of the Parian Chronicle. But there are also very clear allusions to Minos II. Thus in *Od.* xi. 322 Minos is mentioned as father of Phaedra and Ariadne, and he is termed 'baleful-hearted' (ὀλοόφρων), whilst the same Minos is indirectly referred to in *Il.* xviii. 592, where we are told that Daedalus made a dancing-place (χορός) for Ariadne at Cnossus. But we hear most of him from the well-known passage, *Od.* xix. 169, where the disguised Odysseus tells his feigned history to Penelope.

He gives us there that account of the early ethnology of Crete which is of such great importance. 'A fair land and rich, begirt with water, and therein are many men innumerable, and ninety cities. And all have not the same speech, but there is a mixed tongue. There dwell Achaeans, and there too true Cretans and Cydonians, and Dorians and divine Pelasgians. Among these cities is the mighty city Cnossus, wherein Minos, when he was nine years old, began to reign, he who held converse with great Zeus, and was the father of my father, even of Deucalion; Deucalion begat me and Idomeneus the prince. Howbeit he had gone in his ships up into Ilios with the sons of Atreus, but my famed name is Aethon, being the younger of the twain, and he was the first-born and the better man. He told thus many a false tale in the guise of truth.' But feigned though the story was, the geographical and ethnological evidence is sound.

The Minos here mentioned cannot be Minos I of the Parian Chronicle. For (1) he is represented as having lived but a short time before the Trojan War, as his grandson Idomeneus took part in it,

[1] ii. 19, F. Jacoby (1904). [2] iv. 60. [3] *Theseus*, 18.

and accordingly he is the Minos II who is said to have lived thirty-five years before the Trojan War, i. e. about 1229 B. C. (2) He is not described in the Odyssey as the *son* of Zeus, as he would most likely have been had he been so regarded by the poet, but simply as he that held converse with Zeus. This again shows that he is not Minos I, son of Zeus and Europa. On the other hand, he is described in the pedigree put into the mouth of Idomeneus in the *Iliad*[1] as the son of Zeus. This shows that there was another version of the story, in which he was said to be not merely the friend but also the son of Zeus, as was his great ancestor and namesake. Similarly, in one version Theseus is the son of Aegeus, a descendant of Poseidon, in another he is made to be the actual son of that god. (3) As Homer knows the story of Theseus carrying off Ariadne, and as the later legend makes Theseus, husband of Phaedra, another daughter of Minos, the Minos of this passage, father of Deucalion, must be the Minos II, for Theseus is always regarded as living in the generation before the Trojan War. Minos II is therefore that Minos who in *Od.* xi. 221-2 is described as father of Phaedra and Ariadne, and moreover termed the 'baleful-hearted'.

But this Minos of evil repute cannot have been he who for his great justice was made judge of the departed. Moreover, the latter is termed in the *Odyssey* 'the glorious son of Zeus', whereas the *Odyssey*, as we have just seen, regards Minos, 'the baleful-hearted,' not so much as the actual offspring, but as the privileged friend of Zeus. It was then Minos I that Odysseus saw in the land of the departed in the West by the Ocean stream dealing forth sentence to the dead: 'There saw I Minos, glorious son of Zeus, wielding a golden sceptre, giving sentence from his throne to the dead, while they sat and stood around the prince, asking his doom through the wide-gated house of Hades.'[2]

Thus, then, the Homeric poems completely confirm the Parian Chronicle, and the statements of Diodorus and Plutarch, by giving us two kings called Minos.

As this Minos comes nearer to the Classical period than Minos I, there was a tendency to ascribe to a single Minos the great thalassocracy, the earliest of which the Greeks had any tradition. Thus Herodotus makes but a single Minos, combining the parentage of Minos I with the history and death of Minos II. He writes: 'Polycrates of Samos was the first of the Greeks of whom we know except Minos the Cnossian, and any one else who reigned before him who aimed at a thalassocracy.'[3] But this Minos he holds to be the son

[1] *Il.* xiii. 449. [2] *Od.* xi. 568 sqq. [3] iii. 122.

of Europa, for he again writes: 'when the sons of Europa strove for the sovereignty of Crete Sarpedon and Minos got the better, and Sarpedon departed with settlers who became the Lycians on the mainland.'[1] Again, when treating of the Carians he says that 'in ancient times being subjects of Minos and being called Leleges they held the islands not paying any tribute, as far as I can get back in tradition, but they used to man his ships whenever Minos required them; but inasmuch as Minos reduced a great extent of territory the Carians at the same time became a most warlike people'.[2] Finally, he briefly gives us the story of the death of Minos, telling us that he made an expedition to Sicily in search of Daedalus and there met a violent death.[3]

Thucydides likewise thinks only of a single Minos. 'Minos is the most ancient personage of whom we have knowledge who acquired a navy. He made himself master of a very large part of what is now the Hellenic Sea, and he both ruled over the Cyclades and became the oecist of most of them by driving out the Carians and by setting up in them his own sons as chieftains, and he cleared the sea from piracy in order that his revenues might come in the more freely'.[4] In another familiar passage he states that the island population, who were Carians and Phoenicians, were especially addicted to piracy, for these had settled most of the islands, and he proceeds to make the earliest application of archaeology to history by giving as a proof of his statement that when in the course of the Peloponnesian War the Athenians (425 B. C.) 'carried out the purification of Delos by the removal of those there buried, more than half the interments proved to be Carian, as was clear from the fashion of the arms and because the method of burial was the same as that then being practised by the Carians on the mainland'. But when Minos established his navy navigation became more secure, for he removed the miscreants from the islands when he was engaged in settling them himself.[5] At first sight there seems to be some contradiction between Herodotus and Thucydides respecting the Carians, as the former represents Minos as employing them for his navy, whilst Thucydides represents the king as banishing them from the islands. But a closer examination of the words of Thucydides shows that there is no discrepancy between the two statements. The later historian states that Minos drove out the miscreants (κακοῦργοι) and made his own sons the chiefs of the islands. This clearly means that he did not sweep out the population but only their leading men, and that his own sons

[1] i. 173. [2] i. 171. [3] vii. 169.
[4] i. 4. [5] i. 8.

took the place of the banished Carian chiefs who led their people on piratical expeditions.

The literary tradition for two kings or a king called Minos is thoroughly confirmed by the place-names of the Aegean. The name Minoa is found all over the area once dominated by the fleets of the kings of Cnossus. There are not only two towns of this name in Crete, but there is one in Siphnos and another in Amorgus; such, too, was the old name of Paros, whilst down to the end of the classical period it was the name of the small island off Megara from which king Minos carried on his siege operations against that town. There was also a place called Minoa in Corcyra, and another place of the same name in Laconia, whilst by tradition Gaza on the coast of Palestine had once been called Minoa, a fact of special significance when we remember the connexion of Minos I with that region. Not only then do these places confirm the statements of the historians, but their existence naturally led the later Greeks to think only of a single Minos as the founder of these towns and of the first great thalassocracy. One thing, however, comes out clearly in the statements of Herodotus and Thucydides that the people who furnished the great navy that spread far and wide the dominion of the chief of Cnossus were not called 'Minoans', but were the Carians, who, in classical times, still held in their grasp certain parts of the coast of Asia Minor, and were famous as brave and daring soldiers and sailors, serving as mercenaries with the kings of Egypt. Let us by all means act upon the exhortation of Professors Myers and Burrows and 'clear the air'—not of Achaeans but of Minoans.

Next arises the question, to what race did these kings called Minos belong? Professor Burrows speaks unhesitatingly of the 'Minoan house with its blend of Pelasgian, Phoenician, and Doric elements'. Let us test this statement by the actual literary evidence.[1]

The Achaeans in Crete. The Homeric poems make it clear that in the Early Iron Age Cnossus was occupied by a great chief called Idomeneus. He was no mere luxurious sultan, but one of the bravest of those that went to Troy. He took a leading part in the many battles before that city. He was the intimate friend of Agamemnon, Menelaus, and Odysseus, and took his place in the council of chieftains. He is termed 'a match for Ares', and had in his tent many spears taken from the Trojans whom he had slain. Like all the great Achaean princes he is descended from Zeus, as is shown by his pedigree recited by himself.[2] In it Zeus is said to have begotten Minos, father of Deucalion, the father of Idomeneus. But the most

[1] Op. cit., p. 43. [2] xiii. 449.

important passage for our purpose is that in the Catalogue of the Ships[1] where the Cretan contingents are enumerated.

'Of the Cretans Idomeneus the famous spearman was leader, even of them that possessed Cnossus and Gortys of the great walls, Lyctus and Miletus, and chalky Lycastus and Phaestus, and Rhytion, established cities all; and of all others that dwell in Crete of the hundred cities. Of these men was Idomeneus the famous spearman leader, and Meriones, peer of the man-slaying war-god. With these followed eighty black ships.'

There are several points of special interest in these lines. (1) Idomeneus is lord of Cnossus, which comes first in the recital, indicating that it was the leading state in Crete at this time. (2) He also has apparently under his direct rule Phaestus, where are the ruins of the great palace, which is thought to have been destroyed at the same time as the great palace at Cnossus of the Late Minoan II period. (3) He also rules over Miletus and Lyctus. At the former and at Erganus, near the latter, tombs with contents showing the transition from the Bronze to the Early Iron Age have already been found. But to this we shall return later.

In the recital of the five different races which were in Crete (*Od.* xix. 169 sqq.) the Achaeans are placed first, which we may take as an indication that they were the dominant element. But as Idomeneus is the leader of all that came from Crete, and is reckoned as a leading Achaean chief, and as his capital is Cnossus, it is certain that in Homeric days Cnossus, Gortys, Phaestus, Miletus, Lyctus, and various other cities were in the hands of the Achaeans, and that the latter were the overlords of the entire island.

There can now be no doubt that Idomeneus was an Achaean, but if he was such, his father Deucalion and his grandfather Minos must have been Achaeans also. Now as one of the chief physical characteristics of the Achaeans of Homer was their long-flowing yellow hair, our belief in the Achaean origin of the family of Minos would be completely confirmed if there was any evidence that the race was blonde.

But Homer at once supplies us with this. Idomeneus himself is described as *μεσαιπόλιος*, which is commonly taken as meaning 'turning grey'. But it may very well mean that he was 'rather fair', since *πολιός* is the word applied by the Greeks to the flaxen-coloured hair of the children of the Celts. But all doubt is removed by the fact that Rhadamanthus, the brother of Minos I, is twice termed 'yellow-haired' (*ξανθός*) in the poems.[2] It is moreover worthy of remark that

[1] *Il.* ii. 64 sqq. [2] *Od.* iv. 564; vii. 323.

Deucalion, the father of Idomeneus and the son of Minos II, bears the great name of Deucalion of Thessaly, the legendary father of Hellen and the Hellenes.

The traditional evidence has shown us that in the thirteenth century B.C. Cnossus, Phaestus, Gortys, Miletus, and Lyctus were in the hands of the Achaeans, and that they were the lords of the whole island. But of course those who wish 'to rid the air of Achaeans' may deny that there is any real evidence for the presence of that people at so early a date in the Aegean. But just here comes in the very important evidence of the famous Egyptian inscription set up by King Merenptah, the son of Rameses III. He succeeded his father in B.C. 1234 and reigned till about B.C. 1214. In the fifth year of his reign came the great invasion of the Libyans and their allies, comprising Akaiuasha, Thuirisha, Luku, Shardena, and Shakalsha. Akaiuasha has long been recognized as the Egyptian form of the name *Achaean*, and the Leku (Luku) as the Lycians.[1] But as Professor Burrows and Professor Myres are both firm believers in the identification of the Akaiuasha of the Egyptian inscription with the *Achaioi*, and as that is the name of the large fair-haired men whose glories are sung in the *Iliad* and *Odyssey*, there can be no doubt that there were Achaeans in the Eastern Mediterranean, if not in Crete, by at least the thirteenth century B.C. Now as the Akaiuasha took part in the invasion made by the Libyans (Lebu) into Egypt from the west, there is no more likely place from which they would pass over to join the Libyans than Crete itself. But have we any early evidence for any such descents being made from Crete upon Egypt and by people termed Achaeans? Once more a remarkable passage in the *Odyssey* comes to our aid, and again it is a tale told by the disguised Odysseus.[2] He has reached Ithaca and found a kindly welcome in the bothy of his faithful swineherd Eumaeus, who does not recognize his master in the broken-down old wanderer seated by his hearth. He asks the vagrant who he is and whence, and thereupon Odysseus, feeling that the time has not yet come to reveal himself, tells him a feigned tale. He avows that 'in lineage he comes from wide Crete, and that he is the bastard son of a wealthy man, Hylax, who honoured the concubine's son no less than his brothers born in wedlock. When his father died, the lawfully-born sons divided the substance and gave him the bastard's portion, a very small gift and a dwelling. But he wedded by reason of his valour the daughter of men of many acres.

[1] Flinders Petrie, *Hist. of Egypt*, vol. iii, pp. 108–10.

[2] *Od.* xiv. 200 sqq.

For he was no weakling or dastard, and he became a great leader in war. But the labour of the field he never loved, nor home-keeping thrift that breeds brave children, but ever loved galleys with their oars, and wars and polished shafts and darts. Ere ever the sons of the Achaeans had set foot on Troy land he had nine times been a leader of men and of swift-faring ships against a strange people, and wealth had fallen ever into his hands. Thus he waxed dread and honourable among the Cretans. Then when the Achaeans fared to Troy, 'The people called on him and on Idomeneus to lead the ships to Ilios. There we sons of the Achaeans warred for nine whole years, and in the tenth year we sacked the city of Priam and departed homeward with our ships and the gods scattered the Achaeans. But Zeus the counsellor devised mischief against me, wretched man that I was! For one month only I abode and had joy of my children and of my gentle wife and all that I had; and thereafter my spirit bade me fit out ships in the best manner and sail to Egypt with my godlike company. Nine ships I fitted out and the host was gathered quickly. And then for six days my dear company feasted, and I gave them many victims that they might sacrifice to the gods and prepare a feast for themselves. But on the seventh day we set sail from wide Crete with a north wind fresh and fair, and lightly we ran as it were down stream, yea, and no harm came to any ship of mine, but we sat safe and hale while the wind and the pilots guided the barks. And on the fifth day we came to the fair-flowing Egyptus, and in the river Egyptus I stayed my curved ships. Then I bade my dear comrades to abide there by the ships and to guard them, and I set forth to range the points of outlook. But my men gave place to wantonness, being the fools of their own force, and soon they fell to wasting the fields of the Egyptians exceeding fair, and led away their wives and infant children and slew the men. And the cry came quickly to the city, and the people, hearing the shout, came forth at the breaking of day and all the plain was filled with footmen and horsemen and with the glitter of bronze. And Zeus, whose joy is in the thunder, sent an evil panic upon my company, and none durst stand and face the foe, for anger encompassed us on every side. There they slew many of us with the edge of the sword, and others they led up with them alive to work for them perforce. But as for me, Zeus himself put a thought into my heart; would to God that I had rather died and met my fate there in Egypt, for sorrow was still mine host! Straightway I put off my well-wrought helmet from my head, and the shield from off my shoulder, and I cast away my spear from my hands, and I came over against the horses of the

king, and clasped and kissed his knees, and he saved me and delivered me, and setting me on his own chariot, took me weeping to his home. Truly many a one made at me with their ashen spears, eager to slay me, for verily they were sore angered. But the king kept them off and had respect unto the wrath of Zeus, the god of strangers, who chiefly hath displeasure at evil deeds. So for seven whole years I abode with their king and gathered much substance amongst the Egyptians, for they all gave me gifts. But when the eighth year came in due season there arrived a Phoenician practised in deceit, a greedy knave, who had already done much mischief among men. He wrought on me with his cunning and took me with him until he came to Phoenicia, where was his house, and where his treasures lay. There I abode with him for the space of a full year. But when now the months and days were fulfilled, as the year came round and the season returned, he set me aboard a seafaring ship for Libya on a false pretence, for sooth that I was to convey a cargo with him, but his purpose was to sell me in Lybia, and get a great price.'

There can now be no reasonable doubt that in the Early Iron Age not only were these Achaeans in the Eastern Mediterranean, as is shown by the inscription of Merenptah, but that the Achaeans were the lords of Crete, and that from it they regularly made descents upon Egypt.

But there is a further piece of evidence derived from literary tradition which is of great importance. I have pointed out elsewhere that the descent of chieftain houses from some particular god, such as that of the great Teutonic royal families from Odin and Thor, has a most weighty ethnological significance. All the great Achaean chieftains of Homer trace their descent from Zeus, whilst on the other hand the great families of the pre-Achaean period derive theirs from Poseidon, as did also the Phaeacians and the Cyclopes. It is therefore of great import that not only is Minos I, who was renowned for his justice, a son of Zeus, but that the wicked Minos II, who was the grandfather of Idomeneus, was, if not a son of Zeus, at least a descendant from that god and was said to have held converse with him. But there is much more in traditions garnered up by the mythographers and genealogists. The whole of the misfortunes which befell Minos II and his family are ascribed to his impiety in setting aside the worship of Poseidon, who, as we are told by Diodorus, was a great ancient Cretan hero-king. To him through the long ages bulls had annually been sacrificed, but Minos II upset the ancient order of things and offered to his own ancestor or father, Zeus, the bull which by immemorial custom was the due of

Poseidon. The Cretan god in wrath sent a fierce bull which wrought such havoc in Crete that its subjugation became one of the Labours of Heracles. Yet Poseidon wreaked a far worse vengeance upon Minos by instilling into his wife Pasiphae an unnatural passion for a bull, the fruit of which was the Minotaur. These legends point indubitably to a deep-seated feeling of resentment amongst the native Cretans against a great and powerful king of a foreign race who had introduced a new god and rendered to him the sacrifices which ancient usage had ordained for the great Cretan divinity.

There is then good literary proof for Minos being Achaean in origin, but where is there a scintilla of evidence for Professor Burrows's allegation that he was Dorian in pedigree?

There can be no question of the strength of the evidence derived from the literary and inscriptional sources. If we could but bring material witness to show that by at least the thirteenth century before Christ a new culture had entered Crete, and that it was overlapping and permeating that of the previous Bronze Age, we should have gone far to substantiate the traditional statements. Furthermore, if we could show that this invading culture of Crete is similar to that which is found in Peloponnesus and other parts of Greece, where tradition says that the Achaeans became the master race by at least 1300 B. C., and that this culture is identical with that ascribed to the Achaeans in the Homeric poems, our argument would be complete, and there would be no longer any doubt that the people who introduced the new culture into Crete immediately on the fall of the great Cnossian palace of 'Late Minoan II' were the Achaeans of Homer, the Akaiuasha of the inscription of Merenptah. I pointed out in my *Early Age of Greece* (p. 97) that all tradition—Homer, Herodotus, Thucydides, Ephorus (cited by Strabo), &c.—was unanimous in holding that the Achaeans of the Homeric poems had only become masters of Peloponnesus about two generations before the Trojan war, the traditional date of which is 1194–1184 B. C. But the Achaeans of Phthiotis who came with Pelops were not the first Achaeans who had made their appearance in that region. There is a statement handed down by Pausanias [1] that in the time of Danaus (*circa* 1400 B. C.), Archandros and Architeles, sons of Achaeus, came from Thessaly into Peloponnesus and married daughters of Danaus. They acquired great influence at Argos and Sparta, and gave the people the name of Achaeans. This seems to be an old tradition, since Herodotus [2] mentions Archandros and Architeles, sons of Phthius and grandsons of Achaeus, who married daughters of Danaus.

[1] ii. 6, 5. [2] ii. 98.

Strabo, following Ephorus, says that 'the Achaean Phthiotae, who with Pelops made an irruption into Peloponnesus, settled in Laconia, and were so much distinguished for their valour that Peloponnesus, which for a long period up to this time had the name of Argos, was called Achaean Argos; and not Peloponnesus only, but Laconia also was thus peculiarly designated. From Laconia the Achaeans were driven out by the Dorians, and went and settled in what was known as Achaia properly so called, expelling the Ionians therefrom.'[1]

If the sceptic points with derision to the wide difference between the story of Herodotus and Pausanias and that told by Strabo, our answer is that such different stories of the first coming of the Achaeans are by no means incompatible with historical truth. Who can tell when the Saxons first entered England? One version represents Hengist and Horsa as coming in to aid the British king, Vortigern, against the Picts and Scots, and settling in the south of England; but on the other hand it is not at all improbable that the earliest Saxon settlements were in Northumberland. Who can tell whether the Danes who settled in Ireland first got their footing at Dublin or Waterford? The fact is that when the tide of colonizing and conquest begins to flow, different bodies of invaders make their appearance, almost simultaneously in some cases, at different points; sometimes small parties of men seeking new homes pave the way, such as Archandros and Architeles of the Achaean legend, to be followed later on by far larger bodies of population.

The incoming of valiant strangers who marry the daughters of the old kingly houses is no mere figment of the Greek legend-mongers. History is full of such. Strongbow the Norman aided Dermot MacMorogh, and married his daughter Eva; and in more modern days Rolfe married the Indian princess Pocahontas, from whom the best families in Virginia are proud to trace their descent.

I showed that the Achaean chiefs had commonly married the heiresses of the Bronze Age dynasties. Pelops had wedded Hippodamia, daughter of Oenomaus, and Menelaus Helen, daughter of Tyndareus, the last king of the ancient house of Sparta. Thus Menelaus occupied the splendid palace described in Homer in virtue of this marriage, whilst Atreus had quietly obtained through his alliance with the ancient house of Mycenae the kingship of Argolis on the death of Eurysteus. There was therefore no clean sweep of the old population. On the contrary, the great mass remained unchanged, retaining their old habits, language, armature, and arts, the ruling class alone being Achaeans.

[1] p. 365.

I also showed that the culture of the Homeric Achaeans differed essentially in every particular from that of the older race of Greece, as seen in the Shaft graves of Mycenae at Tiryns, Phylakopi, and elsewhere; I further pointed out that their culture coincided with that of the Early Iron Age of Central Europe, and by a long series of inductions I proved that the round shield, the use of iron, the invention and use of the brooch, the practice of burning the dead, and the style of ornament called Geometric, had passed down into Greece from Central Europe, and not upward from Greece into Central Europe, as had up to that time been universally held. Furthermore, the physical appearance of the Achaeans—tall men with long, fair hair—was a characteristic only found in Aegean lands in the case of those who had come down from northern regions. But I was careful to point out that since the Achaeans formed only a ruling caste, and the great mass of the population remained unchanged, they continued to use their own customs, dress, and armature, and to practise their old arts, though now at the bidding and under the influence of their new lords. I made it a main principle that when a new culture with the use of a new metal for cutting implements appears, those made of the old metal do not at once disappear, and that consequently there is a long period of overlap and transition.

Speaking of the Homeric poems, I wrote[1]: 'Of course, we naturally hear much of bronze armour, and of various other objects made of that metal. But it does not follow that with the introduction of iron for cutting implements and the purposes of the plough and herdsman bronze disappears from use, any more than it follows that as soon as copper and bronze began to be employed weapons and implements of stone and flint at once ceased to be made or used. Stone has survived for various purposes, such as millstones, pestles and mortars, and there is evidence to show that axes of stone were employed side by side with those of bronze. For instance, in the Museum of the Royal Irish Academy there are stone axes which undoubtedly exhibit in the shape of their faces the influence of those made of metal. In all ages the poor man, who cannot afford to procure an article of the best and most costly material, must content himself with the inferior; and long after the discovery of copper and the making of bronze, those who could not afford weapons of that metal had to put up with those of stone. It would be unnecessary to call attention to so obvious a fact, were it not that this cataclysmic archaeology is both very widespread and deeply rooted.

Again, I wrote[2]: 'What we have already remarked on the over-

[1] *Early Age*, p. 295. [2] Ibid. p. 304.

lapping of the Bronze and Iron Ages applies to the facts connected with the history of the early Greek sword. None of the swords found in the Acropolis graves at Mycenae have entire bronze hilts, but they are generally of wood, bone, or ivory, ending in a pommel of the same material, often mounted with gold or alabaster. . . . The latest Mycenaean swords are comparatively short, with a hilt differing but little from the earlier type, save in respect of the guard, which is occasionally found. Iron swords of the same type are met with in parts of Greece, showing that the fashion outlasted the Mycenaean Ages. To this transition type we shall return later on.

'That iron and bronze swords of the same form were in use at the same time is shown thus by the actual remains found; this harmonizes completely with the evidence of Homer, where we learn that Euryalus, the Phaeacian, presented to Odysseus a bronze sword, though, as we have seen, the usual material for all such weapons is iron. But the Phaeacians belonged to the older race and lived in a remote island, and therefore swords of bronze may well have continued in use in such out-of-the-world places long after iron swords were in use elsewhere in Greece. The man who could not afford iron had to be satisfied with bronze.'[1]

In my section on the *Shield* I wrote as follows: 'As we have seen, it is quite possible that shields of the older pattern (the figure of 8 and rectangular) continued in use in Achaean times. There is also a late tradition that Proetus and Acrisius were the first to introduce the *clipeus* into Argolis. Whatever may be the value of either of these statements we can at least infer from them that there was a general feeling that the round shield was not indigenous but that it had been introduced or invented in the close of the Mycenaean period.' It is perhaps significant that in the chief passage in the *Iliad* where the great shield which extended from the neck to the ankles is mentioned, it is Periphetes the *Mycenaean* who stumbles over his own great clumsy shield and is immediately pinned to the earth by the spear of Hector.

It would seem that Periphetes, one of the native Mycenaeans, and not an Achaean, still wore the ancient shield of his race. In a short

[1] The reader will hardly believe that in the face of this passage, with which Professor Burrows was well acquainted, as he refers to this very page of my book and had a correspondence with me about it (see Burrows's *Discoveries in Crete*, p. 174 footnote), he had the effrontery to charge me with holding that 'the Homeric swords and spears . . . were all of iron' (*Discoveries in Crete*, p. 214), and he proceeds triumphantly to confute me by citing the evidence of the overlapping of iron and bronze swords furnished by the graves of East Crete (since my book had appeared) in complete confirmation of my views.

time we shall see that in Pelasgic Arcadia the old Mycenean armature remained in vogue until the second century B. C. Nor need we wonder if some of the native Argives in the host led by the Achaeans should have been equipped with their own national weapons, armour, and shield. It takes some time for such changes to come about, and often a considerable period may elapse before all classes can afford to arm themselves with the newer and better panoply. In the late Chino-Japanese war men armed with bows and arrows were serving in the Chinese army at the same time as others furnished with the most modern magazine rifles.'[1]

FIG. 1. THE WARRIOR VASE; MYCENAE.

So in Homer, though the Achaean warrior regularly carries a round shield with a boss, whereas the Bronze Age shield of Greece was either of figure of 8 or of rectangular form, yet there are one or two instances in the *Iliad* where warriors certainly have oblong shields of great length. Naturally the older race who had become the vassals of the Achaeans and accompanied them to war used their own style of armature.

In the case of certain objects of pottery found in the upper strata of Mycenae and Tiryns I was able to point also to evidence of the transition period.[2] The famous Warrior vase (fig. 1) gives us a picture

[1] pp. 319–21. [2] p. 315.

of warriors in the true Homeric equipment, round shields with bosses, long spears, crested helmets, greaves, and fringed chitons seen protruding from under their shirts of mail.

Warriors equipped in a similar fashion have been discovered on a stele (fig. 2) found in recent years outside the Acropolis of Mycenae, not in its original position, but serving with other stones to wall up a grave hewn in the side of a circular sepulchral chamber.

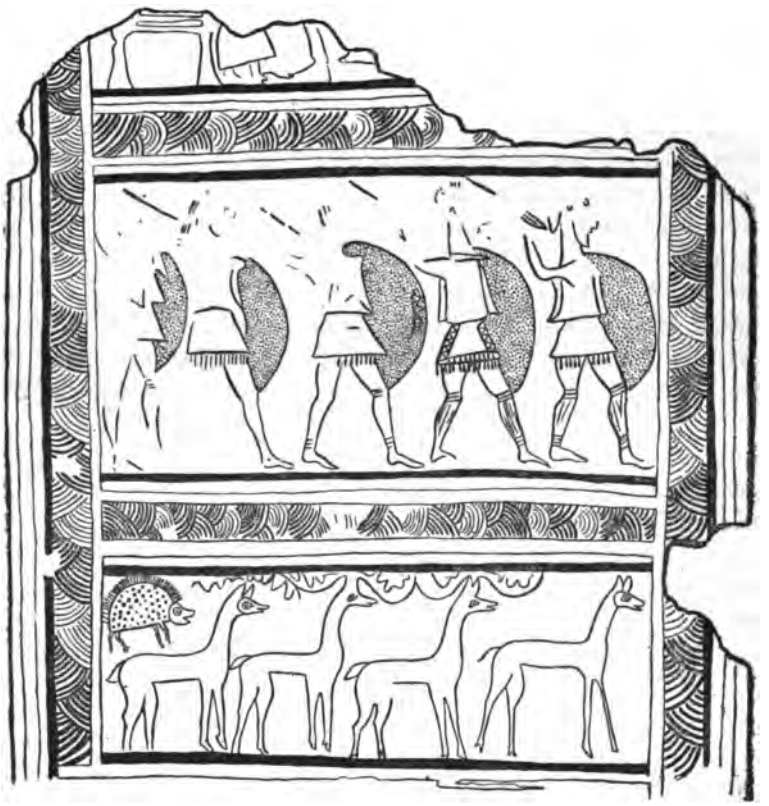


FIG. 2. THE PAINTED STELE; MYCENAE.

Originally it was a sculptured tombstone of the Mycenaean type; it was afterwards plastered over and painted in fresco. Finally at Tiryns, besides the Mycenaean and Dipylon vases, there were discovered some fragments of a style of pottery up till then not found elsewhere. They represent the transition between the Mycenaean and the Dipylon vases. These also show warriors with round shields.

But this overlap of the Bronze and Early Iron Ages is not confined to the mainland of Greece. Just before the publication of my

Early Age of Greece, vol. i, 1901, Miss Harriet Boyd (Mrs. Hawes) had discovered at Gournia a series of remains of great importance. They consisted of geometric vases, brooches, and iron swords of the Hallstatt type, and since then Crete has furnished ample evidence of the same character. In East Crete both bronze and iron swords have been found in the same tomb, thus demonstrating the very transitional period which I had inferred from the Homeric poems and the evidence from Mycenae and Tiryns just cited.

But this is not all. In July, 1909, Dr. Evans announced in the *Times* that he had found at Cnossus tombs containing geometric pottery, brooches, iron weapons, and cremation burials—in other words, all the characteristics of the Homeric Achaean. In his letter, however, he seemed to refer his discoveries to the Dorians, who had settled in Crete some time later than 1000 B. C. In my essay, 'Who were the Dorians?'[1] I pointed out that amongst the many features which separate clearly the Dorians of the classical times ethnically from the Achaeans of Homer, and render it impossible to regard as Dorians the warriors described in the *Iliad* and the *Odyssey*, not the least in importance was the method of disposing of the dead. We have the very best evidence from ancient authorities that so far from the Dorians ever burning their dead, from first to last they always inhumed them, even under circumstances that imperatively demanded cremation. Thus, for instance, when king Agesilaus died far from home and his men had not sufficient honey in which to preserve his body for transport to Sparta, they did not resort to burning, which would have put an end to their difficulty, as the ashes could have been brought home in a vase, but they did what they could to preserve the body by melting wax over it.

Dr. Mackenzie, in ignorance of these most important facts respecting the Dorians, has also too hastily concluded that the cremation burials found at Cnossus are those of Dorian colonists.

Let us sum up the results of our investigations. The archaeological evidence shows clearly that the development of the Stone and Bronze Age culture of Crete was a long and gradual process; that in its early stages it was later in development than Melos, and that it was influenced in its fuller time by Egypt and Melos. Various stages in its evolution can be traced at Cnossus, Phaestus, Palaikastro, Praesus, Vasilike, and other places. The chronology of what is termed the 'Late Minoan' period can be fixed with considerable accuracy from a comparison of its monuments with those of Egypt, and finally the destruction of Cnossus at the end of 'Late Minoan II'

[1] *Anthropological Essays in Honour of Prof. Tylor* (Oxford, 1907).

can be placed from monumental evidence somewhere not long before 1400 B.C., and this date is assigned not by me, but by Dr. Evans himself, and others who have made a special study of the evidence.

The destruction which at this time befell Cnossus, and probably Phaestus and Hagia Triada, was not like those catastrophes which had ended other periods in its history, for this last heralded the incoming of a new phase of culture. But at this very date the traditional chronology places the advent from Palestine of Minos, son of Zeus and Europa, whose name has left such an indelible impress on the Greek mind. A great kingdom was set up by him and he got the command of the Aegean with his navy. This thalassocracy was continued and widened under his descendant and namesake Minos II, who made expeditions far and wide, and in one of these met his death in Sicily about 1219 B.C. But it is just at this very time that, according to the Homeric tradition, the Achaeans are settled in Cnossus and are making descents upon Egypt, whilst an Egyptian inscription of the reign of Merenptah (1234–1214 B.C.) states that in the fifth year of that monarch Egypt was invaded by a combination of various peoples, amongst whom were the Akaiuasha, a name long identified with the Greek *Achaioi*. Now as it was just at this very time that, according to the traditional chronology, Minos II was harrying the coasts of the Aegean and making expeditions in all directions, it is not improbable that the invasion of Egypt in 1229 B.C. was one of his enterprises.

According to Homer, this Minos II who perished in 1219 B.C. was the grandfather of Idomeneus, the great Achaean chief whose capital was Cnossus and who led not only the men of Phaestus, but the entire Cretan contingent to Troy. In other words he was the paramount chief of Crete. But this is not the only evidence that the family of Minos was Achaean. Corroboration is at hand in the statement twice repeated that Radamanthus, the brother of Minos I, was 'yellow-haired', also in the fact that the house of Minos traced its descent from Zeus (as do all the Achaean chiefs in Homer), and that Minos introduced into Cnossus and probably into all Crete the worship of that god, thereby incurring the wrath of Poseidon, the great indigenous divinity.

Minos I had passed into Crete from Palestine at the close of the fifteenth century B.C. But it may be asked, why would a fair-haired Achaean have come to Crete from such a region? In my *Early Age of Greece*, vol. i, I pointed out that in the time of Saul and David (*circa* 900 B.C.) there were in Palestine uncircumcised men of large stature called Philistines whose armature, as in the case of Goliath,

is very like that of the Homeric Achaeans; and that, still earlier, in the fourteenth century B.C. there were also men of great stature in the same region who were using chariots fitted with iron. Their objection to circumcision, as also their large stature, proves that they were not Semites, whilst the last feature, as well as the use of iron and the character of their weapons, points to a European origin.

It is not without significance that the great advance from Palestine made upon Egypt by the Kheta or Hittites in the fourteenth century B.C. took place shortly after the very time when Minos I is said to have crossed into Crete from Palestine. It may well be therefore that Minos I was one of the tall fair-haired northern invaders who had made their way into Palestine either from Greece and Crete, or had come round across the Hellespont and so into Syria. The excavations at Gezer and elsewhere in Palestine show a connexion between that country and Crete, though it is not yet clear which way the influence spread. The story of Pelops shows that some of the Achaeans had passed into Asia Minor, and that a portion of these had later swung back into Europe and down into Greece. So with the Gauls in later centuries, some of them passed across into Asia Minor and advanced as far as Syria with the intention of making their way into Egypt, but were deterred by the envoys of Ptolemy; others of them settled in that region later known from them as Galatia; others again passed back across the Hellespont and settled in Thrace; whilst yet others passed down directly into Greece. Minos I, therefore, may well have been one of these northern invaders who had crossed into Asia, and who from that side entered the Aegean. It is worth pointing out that his traditional date coincides exactly with that assigned to the first appearance of the Achaeans in Argolis in the persons of Archandros and Architeles (*circa* 1400 B.C.).

A dispassionate survey of the evidence will convince the reader that neither this Minos I nor his descendant Minos II had anything to do with the gradual evolution of Cretan culture as seen in the first eight periods of Dr. Evans's classification: on the contrary, Minos I dealt it a fatal blow at the end of 'Late Minoan II'.

Accordingly, the historical evidence compels us to reject the name 'Minoan' for this Cretan culture. But there is still a more imperative need for its abandonment. As it is now being used by Dr. Evans and his followers, it deliberately assumes that all the Bronze Age culture of the Aegean radiated from Cnossus. Yet this is not true either in 'Early Minoan' when, as we saw, Melos was admittedly ahead of Crete, nor in the 'Middle Minoan' period when Cnossus is found importing and copying certain wares from Melos, nor again is

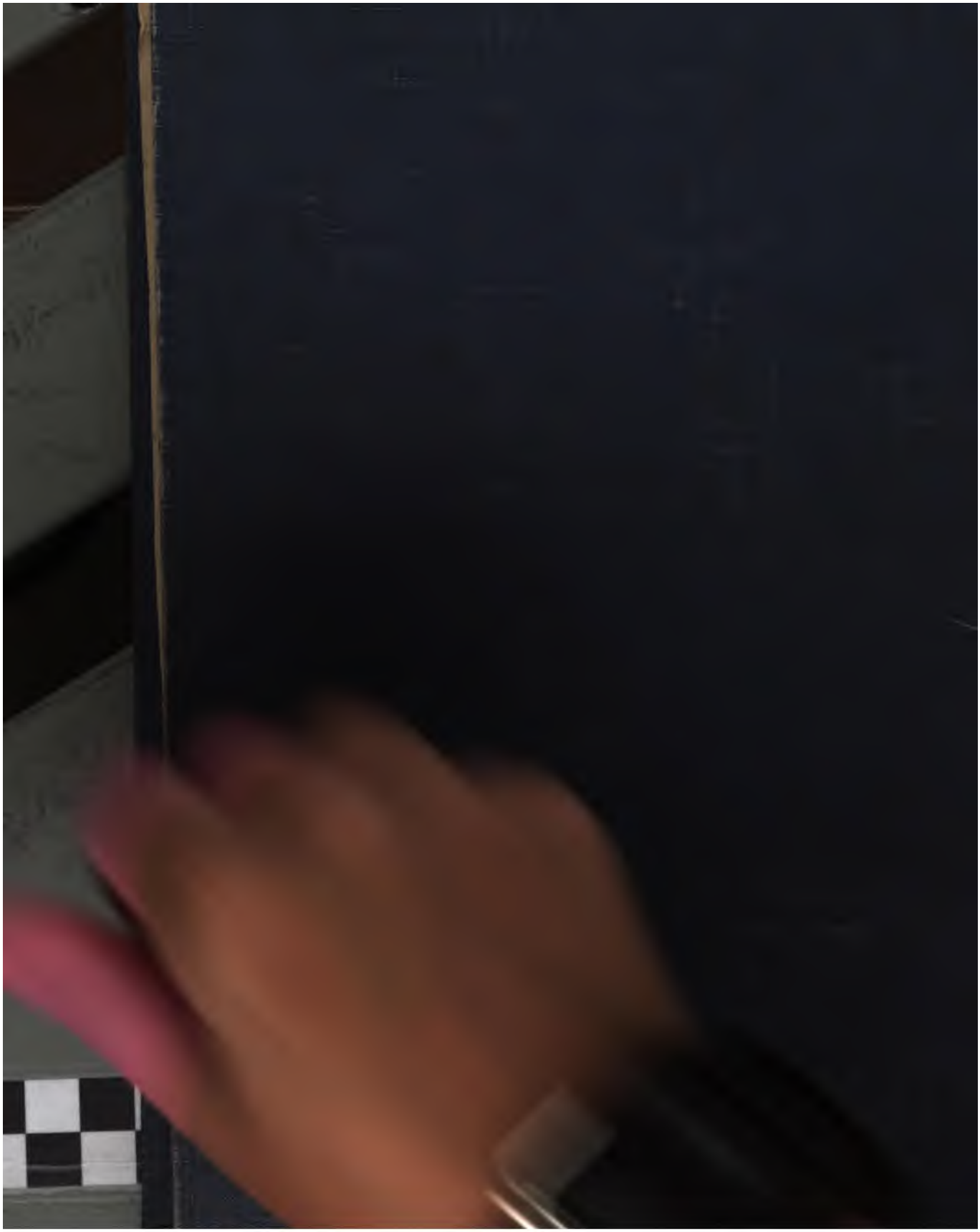
it true in 'Late Minoan' time, for, according to tradition, Minos II brought to Cnossus from Athens the great artificer Daedalus.

It has been assumed that because Cnossus is by far the richest and largest site of the Bronze Age culture, its people must have been the greatest artists in the Aegean. But the story of Daedalus seems to give us the true view, a view not only true of Cnossus but of other great centres of art in various times and places. It by no means follows that because some particular place, whether it be Cnossus, Athens, Syracuse, Rome, or Florence, is especially rich in works of art, the inhabitants of the particular city must necessarily be regarded as the authors of these works of art which adorn their town. Art is a luxury, and the artist, in order to live, must seek wealthy patrons, whether great potentates, such as kings and despots, rich civic communities, or financial and commercial plutocrats. Yet it would not follow that because in time to come the sites of the British and South Kensington Museums in London and of the Central Museum in New York showed an extraordinary wealth of magnificent and costly works of art, that the natives of London and New York had been the creators of the cultures to which these splendid remains belonged. In ancient, mediaeval, and modern times, great monarchs who had or have the control of unlimited wealth were and are especially the patrons of the arts. Minos II seems to have been one of this class, as is shown by the story of Daedalus. The despots of Syracuse and other Sicilian cities in the fifth century B.C. are familiar examples of the same type. Pindar, Bacchylides, and Simonides, nay even Aeschylus himself and doubtless many other artists, flocked to the court of Syracuse. When Athens became the head of the Confederacy of Delos and Pericles used for her adornment the tributes of the allies, though she had great artists of her own, the best of the rest of Greece gathered within her walls. The great painter Polygnotus, whose works were amongst the wonders of Athens, was not an Athenian, but a native of the remote island of Thasos. No better example, however, can be found than those brilliant artists whom Alexander the Great attached to his court, for Apelles came from Cos (or Colophon) whilst Lysippus was a native of Sicyon. The same holds good for Rome in the days of Augustus. It was not a native Roman, but Dioscorides a Greek, that engraved the portrait-head of the emperor, and there can be little doubt that all the best art-products of Rome at this period were the work of Greek artists. Even the Florence of the fifteenth century tells the same tale, for Lorenzo the Magnificent attracted thither the best intellects of Italy. Finally, it was not a native Roman, but Michel Angelo Buonarotti the Florentine, that adorned the Sistine

Chapel with its wonderful paintings. In the face of the teaching of history, it will scarcely be maintained any longer that because Cnossus was the capital of a most powerful dynasty who held the Aegean with their fleets and who were ready to lavish on artificers from all lands, such as Daedalus, the wealth that flowed into their coffers from many a tributary, that Cnossus and the Cnossians were the sole authors and disseminators of the Bronze Age culture of the Aegean. We may even go further and point out that in the great fortifications of Tiryns and Mycenae we have a phase of architecture which certainly was not copied from any Cretan prototype. We may, therefore, safely conclude that Crete and Cnossus were one of the chief *foci* of that Aegean basin wherein the dark aboriginal race of Greece, Italy, and Spain, gifted in artistic powers beyond all others, reached its zenith in the products of the sculptor. But all round the Aegean and in its isles from the Stone Age onwards there had been a gradual development of culture, and in the fullness of times this goodly plant, when it met with especially favourable environment, be it in Melos, Crete, Argolis, or Attica, blossomed out into peculiar beauty. But the art-products of its various *foci* were never limited to the work of the actual natives of the spot, for any specially gifted craftsman inevitably gravitated towards one of these centres. We may well believe that so it was with Cnossus, and therefore we must not admit, as the name 'Minoan' implies, that all the art of the Aegean world emanated from Cnossus or from Crete.

There is little ground for Professor Burrows's view that there are few things which suggest more certainly the Cretan artists than the Bull-baiting fresco at Tiryns and the Flying-fish fresco in Melos, and that 'there would be Cretans at work all over the Aegean'.[1]

Minos is certainly the greatest of all names connected with Crete, and accordingly Dr. Evans too hastily attributed the Bronze Age culture to him, though it seems highly probable that it was the family of Minos that brought in the new culture of the Early Iron Age. Just as at Mycenae and Tiryns we find evidence of the indigenous craftsmen working for but influenced by the tastes of their new masters, so at Cnossus the artists of the old race continued to work under their Achaean lords. Though the latter had but a poor art of their own, they were not barbarians who destroyed everything that was not according to their own taste. The same race in after-times showed a like tolerant and appreciative attitude towards the arts of conquered lands, such as Italy and Spain. The Goths, and Lombards, and Normans were not an artistic race as compared with their

[1] Op. cit., p. 179.

subjects, but there were never greater patrons of art than the Normans. But in all cases, though they admired the native technique, they gradually impressed their own ideals upon the native workmen, and out of the Roman basilica with its round arch arose the Gothic cathedral with its pointed arch and clustered column. So in the products of the Early Iron Age in Greece, such as the Warrior vase, we find the native technique so utilized for the foreign ideal. The great Bronze Age style is decadent, but just as it took centuries to develop mediaeval art out of the Roman, so it took a long period before the old Bronze Age style sank down into the Geometric brought down into Greece by her invaders.